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Why Men Fail and Become Dependent

Hypophrenias of Syphilitic Origin

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Fig. 715



Fig. 870



Fig. 760



Fig. 720

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TABLE OF CONTENTS

	PAGE
Why Men Fail and Become Dependent. By Sanger Brown, II, M. D.	147
Hypophrenias of Syphilitic Origin. By H. W. Potter, M. D.....	156
Malarial Treatment of Female Patients with General Paralysis. By Leland E. Hinsie, M. D.	163
Laboratory Work in the State Hospitals and Its Relation to the Teach- ing and Research Program of the Psychiatric Institute. By Armando Ferraro, M. D.	180
Economic Loss on Account of Hospital Cases of Mental Disease and Associated Physical Disorders in New York State, 1928. By Horatio M. Pollock, Ph. D.	186
Mental Disease in Switzerland. By Benjamin Malzberg	196
Organization of a Physical Therapy Department in a State Hospital. By Richard H. Hutchings, Jr., B. S., M. D.	203
Common Principles in Psychology and Physiology, by John T. Mac- Curdy, M. D. Abstracted by George S. Amsden, M. D.....	217
Age of First Admissions with Encephalitis Lethargica. By Benjamin Malzberg	244
Book Reviews	250
Can the Wages of a State Institution Employee Be Continued While He Is Absent on Jury Duty? Opinion of Attorney-General Ward	276
Dr. Pilgrim Honored	279
Legislative Matters Arising During the 1929 Session, of Interest to the New York State Department of Mental Hygiene. By Lewis M. Farrington	280
Department Legislation	280
Retirement and Pension Laws	281
Civil Service Laws	282
Labor Laws	283
Corrections; Penal Laws	284
Poor and Charities Laws	284

	PAGE
Examinations, Commitments, Etc.	284
Claims	286
Miscellaneous Bills of Special Interest	287
Appointment of Dr. Steckel as Superintendent of the Newark State School	290
Thomas William Salmon Memorial, Inc.	293
Sixth Annual Institute of Chief Occupational Therapists.....	294
Notes	296

WHY MEN FAIL AND BECOME DEPENDENT

BY SANGER BROWN, II, M. D.,

ASSISTANT COMMISSIONER, NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE

To attempt to state why people fail in life may seem an ambitious undertaking. Obviously many factors both in the individual and in his surroundings must play a part in failure. However, the chief reasons may possibly be reduced to a few general causes. Failure will here be considered as it occurs in those people who cannot support themselves and who are dependent upon welfare activities or relatives or friends; in other words the more serious degrees of failure. Certain people are always getting out of work, they are incapable of planning their own lives, and they are regarded as the ne'er-do-wells of the community. To some persons they have simply experienced bad luck. The police regard them as loafers. Psychiatrists often believe them to be either inferior mentally, semi-responsible or unstable. Children are not included in this group as they are dependent for evident reasons. Sufferers from mental diseases are not particularly referred to at this time as with them the problem is a special one. People who are helpless because of physical handicaps are not included because the reason for their dependence is obvious.

Certain generalizations about the causes of failure come to mind. Some persons may fail because they lack ability to such a degree as to preclude success in any undertaking. Some with satisfactory inherent ability may not have this ability developed by proper training. Such an individual may find it almost impossible to make his way and failure results. Some persons may have satisfactory mental capacities but these may be accompanied by such detrimental traits of personality and mental make-up that failure results. A fourth group are those who fail from external causes; these are overtaken by misfortune and calamity and so have no opportunity to achieve success. These latter failures are apt to be temporary, if indeed these persons are to be regarded as failures at all. In welfare work in dealing with dependent people all of these situations are seen many times over.

Views, past and present, held by welfare workers regarding

dependent people are of interest at this time. For many generations certain views have been current regarding dependent people. While earlier views were often without basis of fact more recent opinions are of a more scientific nature. A review of certain of these opinions may throw light upon the subject.

We learn through certain sources that dependent people were cared for in England from as early as the 12th century down to later periods. Until the 16th century at least when the first poor law was passed this work was done chiefly through the church and by kindly people in the parish. Often a legacy was received for charity from the estate of a wealthy man, his interest, however, probably being quite as much in promoting the future welfare of his soul as in helping the poor.

What was the attitude toward dependent people when charity was chiefly a church function? Most all affliction was looked upon as a cross to be borne and hardships were often regarded as just punishments. In accordance with the thought of the times, a certain critical attitude was taken toward dependent people. Their misfortunes were thought to be more or less deserved.

In certain charity work of the present day, the moral conduct of dependent people comes in for careful scrutiny. Everyone is familiar with the long case history in which the moral conduct of the applicant for relief is gone into in great detail and in which sex problems especially are thoroughly, at times unnecessarily, investigated. A reflection of this same attitude is seen in some institutions for delinquents, especially delinquent young people where the moral issues of the situation are emphasized. Discipline is very strict in some of these institutions, certain deprivations are frequent and the idea of punishment is predominant. The employees of the institution show this attitude in dealing with problems of misconduct. At times also in public schools minor disciplinary problems are made much of from a moral viewpoint.

This over-emphasis upon moral issues has a long history, originating at a time when certain ideas about conduct were somewhat different from those of today. While this type of investigation throws light upon people's lives, the immoral conditions found among poor and needy people are not much more frequent than

those which exist among the well to do. A social investigation which lays its chief emphasis upon moral conduct does not reveal the causes of failure in life.

We may now turn to a more modern and more scientific approach, namely, the question of heredity. This study has been of a highly scientific nature. Conclusions drawn carry much weight in scientific circles and with the general public. In fact, perhaps, the majority of people today believe that unfavorable heredity has more to do with faulty traits and failure in life than any other one factor.

The origin of this belief is within comparatively recent times. The work of such investigators as Galton, Mendel and to some extent Darwin, directly or indirectly bears on the subject of inheritance. Furthermore, eugenic studies such as those of the Kallikak family, the Jukes, and other similar studies strongly emphasize the importance of heredity. In psychiatry during the Kræpelinian period considerable importance was placed upon heredity. This emphasis upon inheritance finds expression in social work in case histories. It explains why the social worker starts her case history with a record of the lives of the grandparents and then works toward the patient in question.

That the study of inheritance reveals the presence of certain mental disorders and other variations from the normal in the ancestry which may partly explain the failure in life of a given case, cannot be denied. But the majority of well-informed people no longer consider hereditary tendencies as the chief causes for failure in life, except in a limited number of cases. Some people with excellent progenitors are failures and some with unfavorable heredity are successful.

A third consideration is the physical condition of the dependent individual. Public health campaigns have been given wide publicity and as a result physical examinations are made routinely of many classes of people, including school children, workers in industry and other groups. These medical examinations have been extended to include dependent groups and the social worker generally sees to it that a careful physical examination is made of people coming under her charge.

To what extent are these physical defects or diseases causes of

failure? That unsuspected disease conditions are found as a result of health examinations are to be expected. Often, however, the examination for physical disorders does not include an examination for certain disabilities in the mental sphere. For example, it is within the experience of every psychiatrist to have a problem child brought for his attention who had every sort of physical examination possible in an attempt to discover the cause of the problem, whereas an investigation of the psychiatric situation had been neglected. In former years it was not infrequent to have a problem child brought to the clinic by a social worker with the sole object of having a Wassermann test made. At one time not a few writers declared that syphilis was a highly important cause of mental deficiency, an erroneous view arising from over emphasis on a physical cause. At the present time many people believe that all sorts of personality disorders may be due to glandular conditions, an assumption which is not warranted in most cases from the present state of our knowledge. These ideas over emphasizing the importance of the physical causes of certain mental conditions were gained largely as a result of health campaigns. A few mental handicaps may, of course, be directly traced to some subtle physical disorder. Hookworm disease causes mental retardation and incapacity, and thyroid deficiency has the same effect. But such situations are comparatively rare.

Very often when physical defects or diseases do exist they do not constitute the real cause of failure of dependent individuals. A lame back, a so-called dropped stomach, pains in the arms, these appear to disable some people, whereas an energetic man or woman with the same complaints may be scarcely disabled at all thereby. History is replete with the lives of persons who have been eminently successful despite physical handicaps.

The relation of intelligence to failure in life has been the subject of much study in recent years. This study has created wide interest and psychometric tests have now been made quite extensively on various groups of people. The results have thrown much light upon the mental characteristics of mankind. It has been claimed by some supporters of these studies that the degree of intelligence as determined by the tests explain why some people fail in

life and why others are successful. It has been stated that people who are not very intelligent are apt to be unsuccessful, whereas those of high intelligence are destined to be leaders of mankind. Efforts are made by some people to understand the various problems of child guidance through the sole use of intelligence tests. Social workers are familiar with the use of the tests but at times do not fully appreciate their limitations. Some teachers and parents have been led to believe that the determination of the intelligence quotient is all that is necessary to understand the child.

A test of intelligence may aid in determining why persons are dependent, but it does not give us the full reasons. Persons of low intelligence or even with the milder degrees of mental defect are often relatively successful, or at least do not become dependent, while those of high intelligence may be failures.

A contribution to studies of dependency and failure have come from the field of psychiatry. Earlier psychiatric surveys of various dependent groups were chiefly concerned with the determination of mental diseases or mental defect. While they revealed a number of such cases which had been unrecognized previously, frank psychoses are not met with very frequently among delinquent and dependent people. Mental defect is somewhat more prevalent but is only one of the contributing factors to dependency.

These psychiatric surveys, however, brought out an important fact not formerly recognized. They revealed that while only a limited number of those examined suffered from mental diseases or mental defect, a large number of them were psychopathic. With these earlier psychiatric studies the psychopathic states found were looked upon as expressions of inherent personality. It took later work in this field to show to what extent these so-called psychopathic states were the outcome of unfavorable childhood influences. In fact a study of these influences during childhood is an important contribution by psychiatry to present-day human problems, a subject which will be referred to more fully later.

In accordance with the psychiatric findings above mentioned the social worker proceeded to have dependent people examined by psychiatrists. In the beginning she was not infrequently disappointed when she received a report to the effect that the patient

had no hallucinations, or delusions, was not feeble-minded, and therefore, did not present a psychiatric problem. But time has remedied this difficulty and now a worker usually receives from the psychiatrist a report of the mental make-up of the patient and suggestions as to what to do for him.

Thus it appears that in our surveys of dependent people we have almost completed the circle. Dependent people have been studied physically, mentally and morally, so to speak. It is seen that the worker, whom we first called a social worker and now a psychiatric social worker has had an ever changing set of teachings to follow. In the beginning she was led to believe that a detailed account of the moral life of her cases was always necessary. Then with the professional social worker came a searching study of the ancestry. When a thorough study of physical defects and diseases was required the social worker saw to it that these examinations were forthcoming. She was later ready to have intelligence tests made as a part of the examination and later a formal psychiatric examination. Indeed in some cases the social worker is subjecting herself to psychoanalysis to enable her to understand her work better—the wisdom of which procedure for social workers remains to be seen.

Are these various investigations all that can be offered in the solution of the problem of why people fail in life? Let us consider still another point of view before attempting to answer the question.

No survey of modern psychiatric views is complete without reference to one of its recent contributions, namely: the significance of environmental influences, particularly those of the adult personality upon that of the young child. This study has been carried on, not only by psychiatrists and psychologists, but by educators and others interested in child study. The use of the word environment here refers particularly to intimate personal influences as seen in the reactions between adult and child, either within or without the family.

These studies have greatly influenced scientific opinion regarding how certain unfavorable mental characteristics, as seen in adults, originate. Whereas, formerly these unfavorable qualities were often regarded as inherited or the expression of some

inherent condition, such states are now thought to be acquired in many instances. It is now believed that many persons fail because during their early childhood unfavorable influences of one sort or another affected their mental life, and that these influences paved the way for failure later.

We are now in a position to scrutinize more closely some of the reasons mentioned above as contributory to failure in life. In respect to the group where failure is attributed to lack of mental ability, such persons are rarer than might be expected if we exclude actual mental deficiency. As society is constituted, there is generally a place for most persons, even for those who are very dull mentally. Lack of ability may appear to be more common in mankind than it actually is because many people are misplaced in life or attempt things not within the scope of their capacities.

The group of people who fail because of misfortunes or economic conditions beyond their control, is likewise relatively small. Dependency under these circumstances is generally temporary. If prolonged there is some other reason for it. Where welfare agencies investigate chiefly economic conditions, they are likely to attribute misfortunes as a frequent cause of failure, but where more complete studies are made the real causes are found to be otherwise.

The group of people who fail because of lack of proper training, cultural opportunities, and preparedness for life in general, is of considerable importance. In addition to having little education or none at all, these people may be brought up to be irresponsible or improvident. They cannot compete with others and are apt to become dependent, not through lack of intelligence or capacity, but through lack of proper social and cultural experience, something which should be gained during childhood.

The group who fail because of unfortunate personality, temperament or character, is probably the largest group of all. These handicaps persist throughout life and are far-reaching in their effects. Such traits paralyze the effort of the individual, they interfere with his initiative that are thoroughly demoralizing in almost all relationships in life. They are not necessarily inherited, in fact they are generally acquired, but they are rarely susceptible to modifications during adult years.

To sum up the reasons why people fail in life it seems justifiable to conclude that failure is not generally to be attributed solely to such causes as bad heredity, physical handicaps, hard luck, not even to lack of capacity. More frequently failure is to be traced to unfortunate mental traits in the individual, often acquired during childhood, or at least in evidence then. In people who fail such traits have been permitted to dominate the mental life and so bring about disaster, whereas these traits probably could have been modified and harmful effects to the personality avoided.

If we are correct in believing that many of the maladjustments of life, including dependency and failure, are the result of an unfortunate personality or temperament, or to lack of proper preparedness for life in general, and if we are also correct in believing that childhood is the best time to modify or correct unfavorable traits, what program should be instituted?

To start with, certain generalities may be mentioned as to point of view. It is best to regard all children, unless obviously defective mentally, as capable of a certain measure of success—some in a limited sphere, it is true, and some to a fuller degree. We should rid our mind in the beginning of ideas regarding bad heredity, moral weakness, etc., as these factors are not as important as we once thought. We should remember that improper influences in many different ways found in otherwise good homes or good schools do more to pave the way for failure than any of the inherent drawbacks mentioned above.

Fortunately we can modify these unfavorable influences, at least we can theoretically. Practically we can often do very little because facilities for mental hygiene work in children are very limited; that is, facilities in the way of special classes, or special class teachers; a county program for child supervision and for foster homes; community centers for children; summer camps and many other facilities which we recommend but which are not to be had.

But what is needed quite as much as facilities is a wider knowledge of mental hygiene in general as applied to child life. This knowledge now is limited to a group of scientifically minded people, a number of educators, physicians, psychologists and welfare work-

ers. A colleague has suggested that a text-book on mental hygiene written in simple terms for use in public schools, similar to text-books on physiology, may be helpful. However such knowledge is to be disseminated and facilities made available, many children will doubtless be greatly benefited when these needs are supplied.

HYPOPHRENIAS OF SYPHILITIC ORIGIN*

BY H. W. POTTER, M. D.,

ASSISTANT DIRECTOR,† PSYCHIATRIC INSTITUTE AND HOSPITAL, WARD'S ISLAND, N. Y.

The incidence of positive blood Wassermann tests among the populations of State schools for mental defectives ranges from two to three per cent. It is important, from a clinical point of view, to know how to interpret a positive blood Wassermann or a history of syphilis in the individual case. It is the purpose of this communication to discuss certain pathogenetic mechanisms which will in themselves suggest the clinical interpretation of such cases.

I. *Blastophoria*

Blastophoria, or germ alteration or germ injury through outer influences may give rise to constitutional peculiarities. For a thorough discussion of blastophoria and an excellent summary of clinical and experimental evidence in its favor the reader is referred to Part 17, page 286, of Chapter XI of Myerson's book, "The Inheritance of Mental Diseases". One of the final paragraphs of the above reference is quoted because of its clarity in setting forth the mechanism of blastophoria. "Germ-plasm undoubtedly is conservative and whatever inner force it represents in the transmission of racial (and other) qualities, tends to resist defection or alteration by the trivial matters of the environment or of existence, but it is not invulnerable and probably is not reactionary. It can be altered by disease. It can become, so to speak, diseased, and this diseased condition may persist for one or more generations and may result, as in somatic disease, in the death of the germ-plasm, or again as in somatic disease, may result in recovery so that the germ-plasm comes back to its former vitality, its former normalcy. A conception of germ-plasm such as this, which gives it credit both for staunchness in maintaining racial characters and plasticity in being modified, seems more consistent (than the Weissmannian conception) not only with the facts of life but with our very conception of life itself as something pliable and pliant."

From what is known of syphilis, as an all-pervading disease,

* Read before the Sixth Annual Meeting of the American Orthopsychiatric Association.

† This study was made and the report written by the author in his prior capacity as clinical director, Letchworth Village, Thiells, N. Y.

blastophoria may well be added to its list of involvements of the human system.

CASE 1. A low grade male moron whose general physical as well as neurological examination is entirely negative. Serology of both blood and spinal fluid was negative on repeated examination. He had a normal full term birth and his infancy was uneventful. He was not unusually delayed in walking or talking but he was so backward mentally that he was placed almost immediately in an ungraded class on entering school. He was moderately unruly which led to his commitment at the age of seven. Since admission he has proved to be a typical medium grade defective. There was no evidence of mental deficiency in the ancestry back as far as the grandparents. The father could read and write in four languages. The mother, born in Russia of Russian peasant stock, was illiterate, had no education and did not come to this country until the age of thirty. She was a good housekeeper and took good care of her family. Both parents have syphilis. In the patient's fraternity the first born was a defective and has congenital syphilis. The second born was in the army, deserted, and was considered mentally defective. The third and fourth born were low grade morons as judged by their school records. The fifth is a defective and has a syphilitic degeneration of the optic nerve. The sixth born is the patient. The seventh died at the age of two years of pneumonia, and the last two were still born.

Discussion: How can we explain the fact that in this family of nine children not a single one was normal? Is it heredity? Suppose one of the great-grandparents, about whom we know nothing, was defective, even that could not account for such a cataclysm. Suppose that we interpret the mother's illiteracy as an indication that she is defective, and even granted this, every single living child of a fraternity as large as this one could not have been defective when the father, who could read and write in four languages, was not in the least intellectually deficient. If this situation cannot logically be explained by heredity, there is nothing but the syphilis to turn to. Syphilis does very adequately offer the explanation. In the instance of our patient, who shows no evidence of ever having been infected, common medical sense is all in favor of explaining his mentally deficient state as the end result of the pathogenetic mechanism whereby the parental germ cells or his embryonic or fetal development were vitiated by the syphilitic infection.

CASE 2. A high grade male imbecile, 32 years old with a moder-

ate acromegalia. Neurological examination negative. Serology of blood and spinal fluid normal. Birth normal. Infancy uneventful except for the fact that he was very much retarded in walking and talking. He was always a typical imbecile. The family history is complete as far back as the great-grandparents. The parents are of a particularly good type intellectually but they both have syphilis. A brother of the mother was a hydrocephalic idiot and a second cousin of the patient was definitely retarded. Otherwise, the family history is free from any evidence of mental defect. In the patient's fraternity the first born was a low grade moron, the second a miscarriage, the third a still-birth, the patient comes next in order of birth and last, following him, is another imbecile.

Discussion: Here is a family of three living children, not one of them normal. There is also a still birth and a miscarriage. Is this a matter of bad heredity? The hydrocephalic brother of the mother does not represent a usual consequence of mentally deficient heredity—in fact it could better be explained as an evidence of syphilis. The retarded second cousin of the patient is too far removed from the direct line to be of hereditary significance in this case. Both parents are better than the average in intelligence. Both parents are syphilitic as well. There is also a miscarriage and a still birth, both common sequelae of maternal syphilis. In spite of the fact that the patient shows no evidence physically or serologically of having been infected by syphilis, the indications are that his mental defect is the result of a germ cell vitiation or a maternal toxicosis affecting embryonic development, in either of which instances syphilis was the primary factor.

Thus in instances of mental defectiveness in the offspring of syphilitic parents of average intelligence a blastophoria seems to be the pathogenetic mechanism underlying such hypophrenias. It seems also apparent that the absence of evidence, physical or serological, of a syphilitic infection in the subject, does not weaken the case for blastophoria.

II. *Cerebral Involvement*

Direct infection of the subject and involvement of the central nervous system may occur in very early life or prenatally if there has been a congenital syphilitic infection. Clinically there seem to be a variety of such cases where the hypophrenia is one of the end results of such a pathogenetic mechanism.

There is always found in such cases evidence of a congenital syphilitic infection. Such evidence may be one or another of the so-called

stigmata of congenital syphilis or some kind of positive serological findings in either the blood or spinal fluid. These cases may be in different stages of activity—some representing a complete arrest of the pathological process and others in a very active progressive stage of the disease. Some representative case histories will be cited.

CASE 3. A high grade idiot 7 years old. Birth normal. Very much delayed in walking. Never talked. Was always very low grade mentally. Had many "colds" in infancy. He had a double interstitial keratitis and sabre tibiae. Neurological examination negative. Blood Wassermann and spinal fluid examination negative. Both parents are mentally normal. The maternal grandmother and the mother both have a positive blood Wassermann. The patient is an only child. At autopsy the brain showed no gross deviation in form or size. There was, however, at the posterior end of the lower temporal gyrus of the left hemisphere a defect in the brain structure. This defect was entirely covered by the pia and consisted of an excavation about two centimeters in diameter and two centimeters deep. The walls of this cavity had a moth-eaten, eroded appearance. There seemed to be no acute inflammatory reaction in the adjacent tissue.

Discussion: The interesting point about this case is the existence of brain pathology without any demonstrable clinical equivalents. It is not improbable that the brain defect represents the end result of a former active syphilitic process. As the case was one of inactive syphilis it is not surprising that the serology of both the blood and spinal fluid was negative.

CASE 4. A low grade moron 13 years old. Uneventful birth. He is described as having been sickly in early infancy. He was two years retarded in walking and talking. Prior to admission he was in an ungraded class for four years. He was unruly and given to petty stealing. He shows prominent occipital and frontal bosses, has Hutchinson's teeth, a positive blood Wassermann and a negative serology of the spinal fluid. Neurological examination is negative. The family history is free from any evidence of mental defect. Both parents are syphilitic. In the patient's fraternity the first was a miscarriage, next was the patient, the third was a miscarriage, the fourth died at forty days of an uncontrollable epistaxis, the fifth and sixth are normal and have negative Wassermanns. The seventh and last pregnancy resulted in a miscarriage.

Discussion: Of seven pregnancies, two normal children, one defective, three miscarriages, and a neonatal death have resulted. The patient presents direct evidence that he once had an active process (Hutchinson's teeth, positive blood Wassermann. The two normal children have negative Wassermans. For these reasons, in spite of negative spinal fluid findings and absence of neurological signs, the writer believes that this patient did have, earlier in life, even prenatally, a syphilitic process involving the central nervous system in a so-called "silent area", as in Case 3. The mental defect is therefore the expression of a pathological lesion, syphilitic in nature, involving the central nervous system.

CASE 5. A low grade female imbecile, 14 years old. Imbecile from birth. She is a typical mild hydrocephalic with a positive blood Wassermann and negative spinal fluid serology. The ancestry is of a high type intellectually. The mother has a positive Wassermann. In the patient's fraternity the first born died at seven weeks of a congenital pyloric stenosis, the second was a still-birth, the third is the patient, and the fourth, like the patient, is a hydrocephalic idiot.

Discussion: The whole situation is very clearly one of syphilis. The pathology is probably that of an inactive basilar meningitis of syphilitic origin active in utero, closing off the internal from the external cerebrospinal circulation, hence the hydrocephalus.

CASE 6. A low grade female idiot with a right-sided hemiplegia. The blood Wassermann has been persistently negative. The spinal fluid shows a strongly positive Wassermann positive globulin, no cells, and a negative gold chloride curve. The birth was uneventful. At about the age of 2 years she had a series of convulsions at which time a right-sided hemiplegia occurred. She has never walked or talked. The family history is negative for mental defect. The mother had a positive Wassermann. The patient is the first born. Following the birth of the patient the mother was placed on active anti-syphilitic treatment and since then she has given birth to two normal children, both of whom have negative Wassermans.

Discussion: The defect in this case is undoubtedly symptomatic of cerebral syphilis which is still not entirely quiescent. This case clearly demonstrates the possibility of a positive spinal fluid Wassermann in the absence of a negative blood Wassermann. The birth of two normal children following antisiphilitic treatment of the mother clinches the fact that syphilis is the underlying condition in this case.

CASE 7. A medium grade male moron, 7 years of age, with a left-

sided hemiplegia. The blood and spinal fluid Wassermann tests are strongly positive. In addition the spinal fluid has a positive globulin, 5 cells, and a luetic gold chloride curve (01233322111). The patient has been backward since birth and when a few days old his left-sided paralysis was noted. The father died of general paresis. The mother was mentally normal. There is one other child beside the patient who is very backward in school.

Discussion: This case is cited as it presents a rather typical clinical picture in both physical and serological findings of cerebral syphilis. The hypophrenia is simply another symptom of the pathological process.

CASE 8. This case is similar to Case 7 in all its essential points, history, physical findings, mentality, and serology except that the spinal fluid has, on repeated examinations, shown a paretic gold chloride curve (5555543100).

Discussion: If the paretic gold chloride curve means anything, we are dealing with a juvenile paretic. The point to be stressed in this case is that he has always been regarded as a case of mental deficiency since birth; he has never had, and probably never will have any psychotic manifestations. This case also illustrates the value of the gold chloride test as a means of differential diagnosis—in fact the only means of differentiating this case of juvenile paresis from a non-parenchymatous form of cerebral syphilis.

CASE 9. A medium grade male imbecile, 14 years old. Pupils equal and do not react to light. Left face flattened. Tongue deviates to the left. Deep reflexes exaggerated. Speech slurring. Blood Wassermann strongly positive. Spinal fluid examination shows a strongly positive Wassermann, 5 cells, increased globulin, and a paretic gold chloride curve (5554221000). His personal history is characterized by a marked mental retardation dating from birth. Neither parent was mentally deficient. The father is known to have had syphilis. The mother died at 40 of apoplexy.

Discussion: This case is presented as a typical non-psychotic juvenile paretic, who has been mentally deficient all his life. He has since undergone a very slow mental and physical deterioration, in spite of treatment, and was bedridden for several months prior to his death. At no time were there any symptoms except that of deterioration of a psychotic state.

CASE 10. A medium grade moron, 12 years old. Physical examination entirely negative. Blood Wassermann strongly positive. The spinal fluid, in addition to showing a positive Wassermann, had a luetic gold chloride curve (124422100). The father died of gen-

eral paresis and the mother, a mentally normal woman, has a positive Wassermann. In the patient's fraternity the first born is a defective, the second died at 8 months of age, and next came the patient. Following the patient a child died at 3 months, the next is a hemiplegia, then a miscarriage and finally two normal children with negative Wassermans.

Discussion: This case is presented to show that serological evidences of an active cerebral syphilitic process can be present without any neurological equivalents. The fraternity of the patient presents a classical picture of syphilis.

These cases show rather conclusively that syphilis, through its involvement of the central nervous system in children, can have as one of its manifestations, a hypophrenia.

It is also obvious that depending on the part of the brain involved and the stage of the disease, the clinical and serological picture may vary.

COMMENT

Two essential mechanisms of hypophrenias as manifestations of syphilis are discussed and illustrated by clinical case summaries.

Blastophoria, or germ cell alteration through extra-cellular influences, in this instance, syphilis, is illustrated by Cases 1 and 2. In neither case is there any clinical evidence pointing to a direct syphilitic infection of the subject himself. Each case represents the end product of the blastophoric effect of the parental syphilis on the germ cells.

Direct syphilitic infection with involvement of the central nervous system is illustrated by Cases 3 to 10. Each case differs somewhat and each presents a rather different clinical and serological picture.

It should be pointed out that such cases as are cited in this study, are not clinical rarities; nor are they difficult to detect. A careful physical examination and routine blood Wassermann will bring most of them to light. A spinal fluid examination is indicated on all cases with positive blood Wassermans and on all cases presenting neurological findings. A family history of syphilis or a sudden appearance of biological fatalities in any generation always calls for careful consideration of the possibility of a syphilitic pathogenesis.

MALARIAL TREATMENT OF FEMALE PATIENTS WITH GENERAL PARALYSIS

BY LELAND E. HINSIE, M. D.,

NEW YORK STATE PSYCHIATRIC INSTITUTE AND HOSPITAL, WARD'S ISLAND, N. Y.

The literature on malarial therapy in general paralysis has been growing rapidly since the first reports, issued from the Wagner-Jauregg clinic in Vienna. Almost all of the investigations relate to the results attained in male patients; and in the few isolated instances in which reference has been made to the outcome in female patients, comments are extremely sparse or absent. Indeed, we are waiting for a first report on women to come from the founder of the method—Wagner-Jauregg. The time element is of some importance in the consideration of female patients with general paralysis, for roughly speaking one must wait just about four times as long to collect a group of female patients equal numerically to a group of male patients, since the admission rate is approximately four males for each female paralytic.

From February, 1925, until May, 1928, a period of 39 months we had 107 female patients with general paralysis under treatment. For this report we have selected 66 patients, that is, those patients who completed malarial treatment from 9 to 39 months ago. It is generally conceded that a lapse of nine months following malarial therapy is reasonably long enough to ensure a fair contemplation of the success of the treatment. By far the largest percentage completed treatment more than one and one-half years ago.

The 66 patients to be reported upon had the following points in common:

(1) Each patient was definitely psychotic and entered the hospital by commitment. This means, of course, that we are not concerned here with the so-termed asymptomatic form of general paralysis.

(2) Juvenile general paralysis is excluded.

(3) The 66 patients represent *consecutive* admissions, who met the usual requirements for the administration of malaria. Since the indications for treatment are so widely recognized, we consider it redundant to repeat them in this contribution.

(4) Each patient sustained what is commonly accepted as the minimum reaction to malaria, namely, from 10 to 12 paroxysms of 102° F. or higher.

(5) All patients were treated with the same strain of malaria, a strain that has been associated with the results obtained in male patients on the service of the Psychiatric Institute.¹

(6) Each patient completed her treatment not less than nine months ago. Indeed, the post-malarial period of observation extends from 9 to 39 months.

TABLE I. SUMMARY OF CLINICAL AND LABORATORY RESULTS

Clinical results:

	Number	Per cent
Remission	8	12
Improved	13	20
Unimproved	27	41
Died	18	27
Total	66	100

Laboratory results:

	WASSERMANN REACTION	
	Blood	Spinal fluid
	Per cent	Per cent
Improved	12.5	36
Unimproved	87.5	64

Forty-two per cent of the patients now alive are at home. This compares favorably with the results attained in a group of 69 patients (53 of whom were women) with general paralysis, who had received intensive tryparsamide and mercury treatment. In the latter instance 48 per cent of the patients, alive at the time of the report, were at home. However, the remission rate in the patients treated with tryparsamide was 30 per cent as against 12 per cent in the malarial treated women; and the improved patients were respectively 22 per cent (tryparsamide) and 20 per cent (malaria). There is a large difference in the number of unimproved patients, for those under tryparsamide therapy comprised 20 per cent as against 41 per cent among the total receiving malaria

1. See "The Treatment of General Paralysis by Inoculation with Malaria. A Second Report." H. A. Bunker, Jr., and G. H. Kirby. Arch. Neurol. and Psychiat. Vol. XVI, Aug., 1926, p. 182.

treatment. Under both forms of treatment the death rate was approximately the same (27 per cent and 28 per cent) after somewhat similar periods of observation.

As compared with the clinical outcome in male cases the results among the female cases are not as favorable. Ordinarily, about 35 per cent of the male patients treated with malaria gain states of remission.

Grant and Silverton² reported that they treated 11 female patients with malaria. At the time of the report 5 of them were dead, 1 was improved and 5 were stationary. They concluded that "malaria therapy does not seem to be so successful in women as in men."

Kasperek³ observed that among 20 women treated by malaria 20 per cent gained a remission, 25 per cent improved to some degree, then remained stationary, 25 per cent failed to improve, and 30 per cent died. These results were decidedly less favorable than those observed in men under his care. The death rate in Kasperek's series was over twice as great in women as in men. In Grant and Silverton's series of 11 women the death rate was slightly over 45 per cent, while in our series it was 27 per cent.

TABLE II. RELATION OF AGE AND DURATION OF PSYCHOSIS TO CLINICAL OUTCOME

Number of patients	Clinical result	Average age, years	Average duration of psychosis before treatment, months
8	Remission	35	21
13	Improved	43	31
27	Unimproved	40	38
18	Died	43	31

Our experience corresponds with that of others, who feel that the earlier in the clinical course the patient is treated, the more probable it is that improvement will take place. By comparing again the findings in the tryparsamide treated patients, we observe that the average duration of the psychosis in the tryparsamide group was 26.5 months, while in the malarial group it was 30

2. General Paralysis and the Treatment by Malaria Fever. A. R. Grant and J. D. Silverton. *Journal of Mental Science*. Vol. LXXII, April, 1926, p. 192.
3. Ein Beitrag zur Behandlung der progressiven Paralyse mit Malaria. G. K. Kasperek. *Zeitschr. f. d. ges. Neurol. u. Psychiat.*, CVI, Dec., 1926, S. 586.

months. The difference, though small, may account to a certain extent for the differences in the clinical outcome; we believe, however, that this particular point is not of special value to the material under discussion. It is interesting to observe that in the case of those patients who failed to improve under malarial therapy, but whose clinical condition remained about stationary, the average duration of the psychosis before treatment was instituted was relatively long (38 months), while the duration of those who died and of those who improved was not only the same (31 months), but was appreciably shorter than those whose condition was regarded as unimproved. These statistics for several reasons have a restricted value; they are offered simply as a probable aid to a most obscure situation. They may prove to be meaningless, particularly when we come to understand the relationship of the resistances of the host to those of the invading spirochete.

The latter problem may be approached to a certain extent by a comparison of the clinical results with the reaction types.

TABLE III. CLINICAL REACTION TYPES AND RESULTS

	Remission	Improved	Unimproved	Died	Total
Simple dementing	3	9	21	14	47
Manic or expansive	2	2	2	6
Depressive	2	0	0	0	2
Agitated	3	2	3	0	8
Paranoid	0	1	2	3
	—	—	—	—	—
Total	8	13	27	18	66

There is, as seen by reference to Table III, a striking preponderance (71 per cent) of the simple dementing form of reaction. The reason for such a one-sided proportion is not known. It is probable that others might differ as to the classification of particular cases, but, allowing for a difference of 5 per cent, the proportion would still be prominent, and, moreover, above the average.

It has seemed to us that women who develop general paralysis are therapeutically at a disadvantage, at least because they are not as apt to receive treatment as early as men do. Almost all of the 66 cases reported herein were not breadwinners and were subjected to minimum economic stresses. They certainly could not

have continued with their defects over as long a period as bread-winners as they did in the simple routine of household duties. In other words, deviation from their usual habits of reaction is far less likely to be called to the attention of the physician as early in the case of women as in that of men. This situation is outstanding when the onset is slow, when it is of the simple, dementing course. It is not at all uncommon for women to remain at home untreated for months or perhaps for a year or two. It seems that women of the social class represented by our patients have to do something violent to gain medical attention; they must develop an apoplectic attack or wander aimlessly about the streets or fail to have the proper meals prepared at a stated hour. We know of situations in which the failure to satisfy the husband's alimentary tensions was a significant incentive for calling a physician's attention to the wife's condition. This sounds homely and humorous, but the principle behind it is not to be cast aside as insignificant. Bunker and Kirby have called attention to the consideration that male patients of the simple dementing type generally receive treatment considerably later than the expansive and especially the "manic" patients.

Our figures are somewhat at variance also with those in male cases with respect to the frequency and clinical outcome of the manic type of general paralysis. We grouped only six cases (9 per cent) as such; furthermore, not one of the six attained a state of remission. Usually favorable results are largely enhanced by the inclusion of a high percentage of the manic form of reaction. Hence, in comparison with the figures obtained in the malarial therapy among male patients, this feature deserves attention. Whether it is simply a particularity of the 66 cases we are reporting is not certain to us.

We are becoming more and more appreciative of the role of the personality make-up in the clinical outcome of patients with general paralysis. In general it may be stated that the release through general paralysis of a schizophrenic syndrome is far less liable to be satisfactorily resolved than is the release of a manic-depressive picture. That was our experience in the tryparsamide treatment of general paralysis and it holds true in our observations with malarial therapy.

Because we felt that we might be able to throw some light on the indications or contra-indications of malarial therapy in general paralysis from the standpoint of the reproductive activity of the patient, we reviewed our material with that in mind.

Of the 66 patients, 62 were married and had been married for several years. Four patients were unmarried. Among the 62 married, 39 became pregnant, having a total of 121 pregnancies, of which 60 resulted in children, who grew into adulthood. These general figures have an added significance, when it is considered that 23 of the 62 married women never became pregnant, though contraceptive measures were not employed. In other terms, 37 per cent were nulliparae; Solomon's figures in 205 patients (191 paretic and 14 tabetic) comprised 45.4 per cent nulliparae. Moore advances the interesting suggestion that the repeated pregnancies may confer protection from late neurosyphilitic manifestations to a greater extent than does a single pregnancy. Since he was speaking of a group of asymptomatic neurosyphilitic patients, our findings are not to be placed with his; nevertheless, it is significant that 42 per cent of our patients were multiparae, meaning that multiple pregnancies apparently were not as protective, if that term may be used, as no pregnancies at all. An analogy more nearly approaching Moore's material is the consideration of single and multiple pregnancies. Among our 39 women who had experienced pregnancy 13 had been pregnant only once, while 26 had been pregnant from two to nine times. There is nothing in our investigation to indicate that there is any relationship between the frequency of pregnancy and the clinical course or outcome.

In what way, if any, did the group of women, who had previously passed through several pregnancies, differ under malarial therapy from the group of women who had never been pregnant? In our present experience there was one outstanding difference, namely, all those women who attained a state of remission had passed through one or more pregnancies. Stated in another way, none of the women who had never been pregnant achieved a phase of remission. Fortunately, we were able to determine the age at which syphilis was acquired by the eight patients with remissions. There was nothing that appeared to us to be distinctive as regards

the number of pregnancies preceding and succeeding the chancre stage and their relation either with the clinical type of general paralysis or with the clinical response to malarial therapy. Nor did the age at which the chancre was acquired seem to throw any light on the problems. Furthermore, a study of the latency period (i. e., from the date of acquisition of syphilis until the first manifestations of general paralysis) which varied from 7 to 21 years, showed that there were no essential differences in the duration of the latency period among the patients of the four groups (remission, improved, unimproved, dead). According to our observations we are privileged only to suggest that pregnancies antedating the onset of the symptoms of general paralysis probably bear a favorable influence upon the clinical outcome with malarial therapy.

On the other hand, the above suggestion is open to question, when we consider that in the "improved" group (13 patients) 6 had never been pregnant, while 7 had experienced from 2 to 9 pregnancies. Moreover, 6 of the 16 patients who are dead never became pregnant, whereas the remaining 10 had from 1 to 8 pregnancies. And, finally, 11 of the 27 women, whose clinical condition was classified as "unimproved" had never been pregnant, while the other 16 had been pregnant. According to our present findings, we are obliged to state that the question of the influence of pregnancies on the clinical course of general paralysis cannot be answered in any definite manner. We can only wait to see if further studies will bear out the impression that states of remission are more frequent in pregnant than in non-pregnant women.

One of the most difficult fields of investigation in general paralysis comprises the collection of accurate and sufficient data relative to the age at which syphilis was acquired. This is especially true in female patients, who in the large majority of instances have no knowledge at all that they had ever acquired the disease. Sometimes this may be due to faulty memory, sometimes to the operation of the wish not to remember; but often one may rely upon the statement that the patient is in complete ignorance of the onset of infection. It is probable that the chancre never appeared; we are reminded of Moore's observation that, when syphilitic infection occurs at or shortly after the time of pregnancy, the chancre (or secondary syphilis) generally does not develop.

We were able to ascertain the age at the onset of syphilis in 24 of the 66 patients. (Table IV.)

TABLE IV. PATIENT AGE AT ACQUISITION, LATENCY PERIOD, CLINICAL OUTCOME

	Age, years	Latency period, years	Clinical outcome
1	26	7	Remission
2	19	21	Remission
3	24	11½	Remission
4	20	7½	Remission
5	19	7	Remission
6	26	16	Improved
7	18	14	Improved
8	24	22	Improved
9	22	8½	Unimproved
10	25	15¼	Unimproved
11	24	21	Unimproved
12	38	9	Unimproved
13	24	3	Unimproved
14	27	7	Unimproved
15	20	14	Unimproved
16	21	20	Unimproved
17	18	3	Unimproved
18	32	12	Unimproved
19	42	6	Unimproved
20	20	14	Dead
21	22	26	Dead
22	28	12½	Dead
23	17	17	Dead
24	17	19¼	Dead

The data in Table IV do not lend themselves to much discussion. Nor is any help derived when they are studied in connection with the incidence of pregnancy. We submit the evidence with the hope that it may serve to be useful in combination with that of other investigators.

It is our impression that in malaria-treated patients with general paralysis sufficient facts are not at hand to warrant any conclusive opinion regarding the influence of pregnancy or of the latency period on the clinical results.

In general it was our experience to find in the group of 66 patients that the incidence of miscarriages could not be correlated with any subsequent observations. Patients who died early in the course of their illness had had approximately as many miscarriages and as

many living children as was the case in the patients who survived the malarial treatment.

It is a generally accepted opinion that there is no well-defined relationship between the intensity of the Wassermann finding in the blood and spinal fluid and the clinical condition of the patient. In a review of our material we are able to substantiate this opinion. We were interested, furthermore, in the study of the findings in the Wassermann reactions before any treatment was instituted from the standpoint of the frequency of pregnancy. But, again, the results were lacking in any specificity. Likewise, malarial treatment seemed not to influence the Wassermann findings in a manner any different in the nulliparae than in the multiparae.

TABLE V. WEIGHT OBSERVATIONS

Number of patients	Clinical result	Weight Status	
		Number gained	Number lost
8	Remission	8	0
13	Improved	13	0
27	Unimproved	22	5
18	Died	2	16

Since the findings represented in Table V are in accordance with those usually found after malarial treatment, we feel that further comment would be redundant.

Of the 18 patients who died, 7 died during the course of malarial therapy, 5 died within 1 month after the termination of treatment and 6 died from 5-19 months later. In each of the cases, though the majority was deteriorated to a very advanced degree, there was none of the usual contraindications to the employment of this form of therapy. We are inclined to the belief that in severely deteriorated female patients it is more advisable to institute tryparsamide treatment; we hold the opinion, tentatively at least, that they respond more favorably to tryparsamide.

OBSERVATIONS ON LABORATORY REPORTS

The Wassermann findings have already been indicated, namely, an improvement in the blood in 12.5 per cent of the patients, and an improvement in the spinal fluid in 36 per cent. In no case was there a return to complete negativity in both the blood and fluid,

and in rare instances was either alone rendered negative. On the contrary, the blood Wassermann reaction was reported more positive in a greater number of cases than it was reported negative.

In order to minimize the probable errors in the evaluation of blood and spinal fluid Wassermann changes, it was deemed helpful to have control material at hand. Hence, we subjected three female patients with general paralysis to such tests at intervals of two weeks, for a period of six to eight months. All the tests were performed in the same laboratory by the same technician. After the period of control the patients were inoculated with malarial parasites.

The results attained in one of the control cases is given in Chart I. (Case No. 74040. M. Mc.)

CHART I. SEROLOGICAL REPORTS							
	Blood	Spinal fluid					
Date		0.15	0.4	0.8	Cells	Globulin	Gold curve
Sept. 26-26							
Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	24	+++	
Nov. 9-26							
Ale.	+++	+++++	+++++	+++++			
Chol.	+++	+++++	+++++	+++++	18	+++++	
Nov. 16-26							
Ale.	+++	+++++	+++++	+++++			
Chol.	+++	+++++	+++++	+++++	37	+++++	
Nov. 30-26							
Ale.	+++	+++++	+++++	+++++	24	+++++	
Chol.	+++	+++++	+++++	+++++			
Dec. 14-26							
Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	31	+++	4453210000
Dec. 28-26							
Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	35	+++++	5554331000
Jan. 11-27							
Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	40	+++++	5555542100
Jan. 25-27							
Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	14	+++++	5555542100
Feb. 8-27							
Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	21	+++++	4555533100

Feb. 28-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	24	+++++		5555533210	
Mar. 14-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	25	+++++		4555533310	
Mar. 28-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	27	+++++		4444432210	
Apr. 12-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	41	+++++		4444333210	
Apr. 25-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	24	+++++		4555553320	
May 9-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	19	+++++		4555543320	
May 23-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	17	+++++		5555532000	
MALARIAL TREATMENT IN JUNE, 1927									
July 12-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	3	+++++		5555543210	
Aug. 30-27									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	3	+		5555433220	
May 26-28									
Ale.	+++++	+++++	+++++	+++++					
Chol.	+++++	+++++	+++++	+++++	0	+++		5555554320	

Obviously, there is a striking uniformity in the laboratory reports recorded in the foregoing chart. The number of cells per c. cm. remained between 17 and 41 for the eight months preceding treatment and, after treatment, was reduced to normal range. The globulin content of the spinal fluid was reported much the same throughout the control period. One notices also but very slight variation in the colloidal gold curve. This applies as well for the control as for the post-malarial period, save for the improvement in the cell count and globulin content.

In the second case, Chart II (Case No. 74002, E. Ha.), during the control period there were no alterations in the Wassermann reaction of the blood or spinal fluid; the globulin content varied slightly;

174 MALARIAL TREATMENT OF FEMALE PATIENTS WITH PARALYSIS

the cell count of the spinal fluid varied more appreciably than it did in the first case. The colloidal gold curve, however, showed prominent divergencies; compare, for example, the reading 5555432110 with 1223332110. Unfortunately, we were not able to continue the observations longer than two months beyond the cessation of malarial treatment.

CHART II. SEROLOGICAL REPORTS

Date	Blood	Spinal fluid			Globulin	Cells	Gold curve
		0.15	0.4	0.8			
Nov. 1-26							
Alc.	+++++						
Chol.	+++++		+++++		++	10	
Nov. 16-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++	11	
Nov. 30-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	++	7	
Dec. 14-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	++	16	3554420000
Dec. 28-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++++	48	5542210000
Jan. 11-27							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++	72	4555532200
Jan. 25-27							
Alc.	+++++	+++++	+++++	+++++			
Chol.		+++++	+++++	+++++	+++++	47	4555532200
Feb. 8-27							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++	23	2444433210
Feb. 28-27							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++	24	5555432110
Mar. 14-27							
Alc.	+++++	+++++	+++++	+++++	+++	21	2444332100
Chol.	+++++	+++++	+++++	+++++			
Mar. 28-27							
Alc.	+++++	+++++	+++++	+++++	++	17	2234333210
Chol.	+++++	+++++	+++++	+++++			

Apr. 11-27

Ale.	+++++	+++++	+++++	+++++	+++++	27	1223332110
Chol.	+++++	+++++	+++++	+++++			

Apr. 25-27

Ale.	+++++	+++++	+++++	+++++	+++++	16	4544433210
Chol.	+++++	+++++	+++++	+++++			

May 9-27

Ale.	+++++	+++++	+++++	+++++	+++++	15	4555443210
Chol.	+++++	+++++	+++++	+++++			

May 23-27

Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++++	11	5555532000

MALARIAL TREATMENT IN JUNE, 1927

July 12-27

Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++++	11	5555532000

Aug. 30-27

Ale.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	++	1	5555554420

The clinical condition in both of the above control cases remained essentially stationary during the control period and following malarial treatment there was only slight improvement.

The third control case, Chart III (Case No. 73930, F. M.), extended from October 11, 1926, until May 23, 1927, a period of over seven months, and comprised 16 successive blood and 15 successive spinal fluid Wassermann tests, performed approximately a fortnight apart. There were no deviations in any of the Wassermann reports; the globulin content and cell count of the fluid remained elevated; and the colloidal gold curve was essentially similar in each instance. Clinically, the patient's condition also remained stationary.

She was a negress. She was inoculated with malarial parasites first on June 1, 1927, and because she failed to develop any symptoms she was reinoculated on June 14. The second inoculation was unsuccessful in the production of any symptoms of malaria. This was not an uncommon result among the negroes inoculated.

On June 24, 1927, we began to treat her with tryparsamide and by September 9, 1927, she had received a total of 12 intravenous injections of 3.0 grams to the dose.

Immediately following the first course of tryparsamide there was improvement in the spinal fluid Wassermann reaction; the globulin content and cell count of the fluid was reduced to normal range. Unfortunately, a blood Wassermann test was not done. The second course of tryparsamide consisted of 12 injections of 3.0 grams per dose and extended from November 4, 1927, until January 20, 1928. One notices a distinct improvement under tryparsamide therapy; the patient has also improved clinically.

CHART III. SEROLOGICAL REPORTS

Date	Blood	Spinal fluid			Globulin	Cells	Gold curve
		0.15	0.4	0.8			
Oct. 11-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++	43	
Nov. 9-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++	11	
Nov. 16-26							
Alc.	+++++						
Chol.	+++++				+++	72	
Nov. 30-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++++	29	
Dec. 14-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	++	48	5555222000
Dec. 28-26							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++	53	5554321100
Jan. 11-27							
Alc.	+++++	+++++	+++++	+++++		48	5555553210
Chol.	+++++	+++++	+++++	+++++	+++++		
Jan. 25-27							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++++	15	5555553210
Feb. 8-27							
Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	+++++	22	4555553210
Feb. 28-27							
Alc.	+++++	+++++	+++++	+++++	+++++	41	5555543210
Chol.	+++++	+++++	+++++	+++++			
Mar. 14-27							
Alc.	+++++	+++++	+++++	+++++	+++++	33	5555543210
Chol.	+++++	+++++	+++++	+++++			

Mar. 28-27

Ale.	++++	++++	++++	++++	+++	29	555433210
Chol.	++++	++++	++++	++++			

Apr. 12-27

Ale.	++++	+++	++++	++++	++++	25	5554432210
Chol.	++++	++++	++++	++++			

Apr. 25-27

Ale.	++++	++++	++++	++++	++++	19	555555320
Chol.	++++	++++	++++	++++			

May 9-27

Ale.	++++	++++	++++	++++	++++	27	5555543200
Chol.	++++	++++	++++	++++			

May 23-27

Ale.	++++	++++	++++	++++			
Chol.	++++	++++	++++	++++	++++	21	5555543200

TRYPARSAMIDE TREATMENT BEGUN

Sept. 20-27

Ale.	not	—	—	++			
Chol.	done	—	++	++++	±	2	5555554330

May 26-28

Ale.	++++	—	—	+++			
Chol.	++++	—	±	++++	+++	0	5555553310

One of the most favorable responses from the serological standpoint is the following (Chart IV), which is rare in our experience with the 66 cases reported in this contribution.

CHART IV. A CASE SHOWING IMPROVEMENT IN SEROLOGICAL FINDINGS

Date	Blood	Spinal fluid			Globulin	Cells	Gold curve
		0.15	0.4	0.8			
Sept. 29-25							
Ale.	+++	++++	++++	++++			
Chol.	++++	++++	++++	++++	+++	1	5544321000

MALARIA TREATMENT IN OCTOBER, 1925

Nov. 10-25

Ale.	++	—	++	++++			
Chol.	++++	—	++++	++++	±	3	4432111000

Jan. 27-26

Ale.	+++	—	—	++			
Chol.	++++	—	+	++++	±	3	not done

Apr. 26-26

Ale.	+	—	—	+			
Chol.	+++	—	—	++	±	6	not done

July 27-26

Ale.	++	—	—	+		
Chol.	+++	—	—	+	—	0 not done

Sept. 28-26

Ale.	++	—	—	—		
Chol.	++++	—	—	—	±	0 not done

The patient whose laboratory findings are recorded in Chart V received malarial treatment during December, 1925, and January, 1926. One notices that after about two and one-quarter years following malarial therapy there have been no appreciable changes in the blood or spinal fluid Wassermann reactions, both remaining "fast", save for a transient reduction in the intensity of the spinal fluid response. The globulin content has persistently remained above the average and the colloidal gold curve has been decidedly elevated, progressing from an almost negative curve before treatment to a "typical" paretic curve following treatment. Clinically, the patient's condition has improved over the pre-treatment status and she is now in a stationary phase, but not well enough to leave the hospital.

CHART V. SEROLOGY OF A CASE

Date	Blood	Spinal fluid			Globulin	Cells	Gold curve
		0.15	0.4	0.8			
Dec. 1-25							
Ale.	++++		++++				
Chol.	++++		++++		+++	11	
Dec. 8-25							
Ale.	++++	++++	++++	++++			
Chol.	+++	++++	++++	++++	++	11	0011100000

MALARIAL TREATMENT

Jan. 26-26

Ale.	++++	++++	++++	++++		
Chol.	++++	++++	++++	++++	++	0

Feb. 23-26

Ale.	++++	++++	++++	++++		
Chol.	+++	++++	++++	++++	++	0

June 1-26

Ale.	++++	++++	++++	++++		
Chol.	++++	++++	++++	++++	+	5

Sept. 28-26

Ale.	++++	++++	++++	++++		
Chol.	++++	++++	++++	++++	+++	0

Mar. 21-27

Alc.	+++++	—	+++++	+++++	++	1	0133321000
Chol.	+++++	+++++	+++++	+++++			

Aug. 30-27

Alc.	+++++	+++++	+++++	+++++	+	0	5554332110
Chol.	+++++	+++++	+++++	+++++			

Mar. 13-28

Alc.	+++++	+++++	+++++	+++++			
Chol.	+++++	+++++	+++++	+++++	++	0	5444432210

SUMMARY

Malarial therapy seems not to be as efficacious in female as in male patients with general paralysis. States of complete remission were obtained in 12 per cent of 66 female patients.

In our experience with female patients malarial therapy does not exert as favorable influences as tryparsamide does.

Women who have experienced pregnancy seem to obtain better results under malarial therapy than those who have never been pregnant. Moreover, pregnancy antedating the inception of syphilis apparently has some beneficial significance. These two suggestions are cautiously advanced.

The Wassermann reactions of the blood and spinal fluid are favorably influenced less frequently in women than in men, under malarial therapy.

Previous pregnancies seem not to determine the degree of modifiability of the Wassermann findings under malarial therapy.

LABORATORY WORK IN THE STATE HOSPITALS AND ITS RELATION TO THE TEACHING AND RESEARCH PROGRAM OF THE PSYCHIATRIC INSTITUTE*

BY ARMANDO FERRARO, M. D.,

RESEARCH ASSOCIATE IN NEUROPATHOLOGY, PSYCHIATRIC INSTITUTE, WARD'S ISLAND,
NEW YORK CITY

I have just returned from a series of visits to the various State hospitals during which I have paid special attention to the laboratory work. It was my purpose to become personally acquainted with the actual organization of the work and with the men in charge of the laboratories. I must say, at the outset, that wherever I have been, it has been a real pleasure for me to feel how deeply interested all the superintendents were in everything connected with laboratory activities and I have been very much impressed by their spirit of understanding and cooperation in considering the means and ways of improving the laboratory activities. On the side of the pathologists, I have also found a cooperative spirit for which I wish to express my deep appreciation.

The organization of the laboratory work in the State hospitals and other institutions in the Department of Mental Hygiene is a very important subject and might be analyzed from three different angles.

- (1) Actual functioning of the State hospital laboratories.
- (2) Actual needs of the hospital laboratories.
- (3) Connection of the laboratories with the Institute's activities.

The first problem to attract our attention in connection with the actual functioning of the laboratories is the one dealing with the pathologists themselves, whose number is actually very small in our State hospital system. This lack of pathologists, which is a well-known fact, is reflected in the number of vacancies listed in six of our State hospitals having a total of 17,176 patients who are at the present time more or less deprived of an organized service of clinical and histological pathology. The following are the hospitals referred to: Brooklyn (and the Creedmoor Division), Central Islip,

* Presented at Quarterly Conference at Albany, March 22, 1929.

Gowanda, Harlem Valley, St. Lawrence, Willard. Other vacancies are listed in some of the State institutions for mental defectives.

A second point of interest deals with the activities of the pathologists actually in the service. In my survey of the laboratories I have found that the activity of the pathologist is at the present time almost entirely devoted to clinical pathology and that histological pathology is practically neglected. This situation is quite the reverse of the one mentioned in Dr. Tiffany's report in 1919. I thoroughly appreciate the great importance of clinical pathology and I am very strongly in favor of a highly developed system of routine investigation in the field of laboratory procedures. No one can deny the great help that the laboratory is giving each day to the clinician by furnishing him very important data for the better diagnosis and treatment of the patients. I feel that the activities of the laboratory along these lines deserve high praise and that every move tending to improve the laboratory facilities is to be commended.

On the other hand, tissue work is as important as the biochemical, serological or bacteriological work, in so far as tissue work has a practical as well as a scientific value.

It is true that no great results have been reached in the past along the lines of prevailing tissue investigation but results in histological pathology are slower and profitable investigation of the nervous system requires a pathologist of exceptional capacity. Now we all frankly admit that while general histology is well known by the average pathologists there are very few who possess specialized training in neuropathology; and it is well known that even among the leading pathologists, but very few are really competent in this field. The reasons lie in the fact that a good neuropathologist must have a solid foundation in neuroanatomy and neurophysiology and must be well trained in clinical neurology and psychiatry.

At the present moment neuropathology is advancing in the foreground and some of the medical schools are even creating special chairs for teaching this subject. Furthermore, the improvement in our technical methods is allowing us a better morphological investigation of the nervous tissue and, with the very recent tendency towards the application of histochemical methods to the study

of the nervous tissue, which tendency I strongly favor, we may expect more promising results from tissue studies.

On the other hand, with better and more appropriate training of the pathologists of the various State hospitals, we can expect them to make valuable contributions to the solution of some of our main problems for which the collaboration of various units is more and more desirable.

To develop a profitable program of activity in laboratory work the problem of the personnel lies in the foreground. Among urgent requirements in this connection I would propose the following:

(1) To secure the assistance of a pathologist for every State institution.

(2) To add an assistant pathologist in those hospitals where the number of patients is above 3,500.

(3) To provide that every laboratory be given the help of two technicians, one of them especially trained in clinical pathology and the other one in histology.

(4) To provide that every laboratory be given the help of one or two attendants for the upkeep of the place, care of the animals and autopsy work.

To secure an experienced pathologist for our laboratory system is difficult as the man must have competent training in both clinical and histological pathology. Because of the fact that men with such experience are not available now in the State service, the only suggestion I can offer is to open the competition to outside men.

In regard to the technical help I favor the plan of establishing the grade of laboratory technician in our State system. I feel that these specialized helpers are entitled to the grade of technician, thus giving them a better standing and making the position more attractive to new applicants.

The connection of the State hospital laboratories with the Institute has already been emphasized in Dr. Kirby's paper entitled "The Future Work of the Psychiatric Institute" and should be of practical as well as of scientific value. The main practical aspect might be the training of young physicians who desire to devote themselves to the laboratory. These physicians might be trained to fill the position of assistant pathologists and later on develop into first grade pathologists.

Another practical angle might be the training of senior pathologists in the specialized fields of neuropathology, clinical pathology and diagnostic procedures.

Finally, special training might be given to the technicians in order to teach them the most recent technical procedures which might lead to a desirable kind of standardization of our methods.

The scientific connection between the various hospital laboratories and the Institute might be strengthened by regular courses given to the pathologists on some of our main problems. The results of neuropathological investigations abroad and in the United States could be discussed and correlated with our own findings.

Scientific collaboration between the hospitals and the Institute might be carried on by giving an opportunity to any of the pathologists to work on a special problem in which he has a particular interest and to put at his disposal for such purpose the facilities of the Institute.

The collaboration of the State pathologists in the research program of the Institute is most essential. I feel that their help might be of much value if through a spirit of friendly cooperation they provide the Institute with material which appears to them as being particularly interesting and which at times may constitute an important contribution to the problems on which the attention of the Institute is focussed.

The spirit of cooperation which has happily so long existed between the Institute and the State hospital laboratories could with advantage be further developed. The same spirit should also exist in the State hospitals between the laboratory men and the clinicians. It is through the collaboration of the physician in charge of a given case and the pathologist that important features of a disease are analyzed and that the correlation between the clinical and the laboratory aspects of a problem can be established. It must be the duty of the local pathologist to increase his personal contact with the clinical men and devote his interest to the clinical aspect of some of the most interesting cases if he cares to have his work considered of practical value.

There is one special field in which nowadays the cooperation

between the laboratory and the clinical men is most desirable. It is the field of the vegetative nervous system. A great deal of attention has been paid to the tonus of the vegetative nervous system in many a mental condition and no better field of cooperation is offered for the laboratory men in the valuable help that they can offer to the clinician interested in the same question.

The exploration of the vegetative nervous system requires a complicated investigation of the patient from the neurological as well as from the biochemical and pharmacological standpoint. The careful investigation of the vegetative functions as for instance the respiration, the blood circulation, the blood pressure, the pulse rate, the condition of the pupils, the vasomotor reflexes, the pilomotor reflex, the condition of the sweat regulation and salivary and lacrimal secretion may be performed by the clinician who should also add to his investigation the performances of the pharmacodynamic tests which are of great value in establishing the so-called tonus of the vegetative nervous system, i. e., vagotonia, sympathicotonia, anafotonia or on the contrary, hypotonia of one or of the two systems.

At this stage of the investigation the clinician will have to require the collaboration of the laboratory man and ask for the investigation of all the metabolic functions connected with the vegetative life as for instance the study of the basal metabolism, water metabolism, sugar metabolism, calcium metabolism and the creatinine metabolism. All these data if properly correlated, will certainly give us a better understanding of some of the clinical manifestations in mental pathology and will certainly open the field to new hypotheses and possibilities.

There is also an increased interest in the study of the gastrointestinal content of dementia præcox patients. It seems to me that such an investigation could be performed in addition to the one dealing with the above mentioned functions thus enlarging as much as possible our point of view on the etiology of such an important disease.

Besides the carrying through of investigations dealing with a major problem the laboratory should function as a stimulus to the clinical men for a more detailed physical examination of their

patient by pointing out at special meetings or conferences the relation of the clinical record to the post-mortem findings. Where the clinical data are satisfactory and the case is of special interest the pathologist might propose the publication of his report in collaboration with the clinician who has taken care of the patient, thus stimulating better and more intensive study of some of the patients.

In order to develop the program of activity of the laboratory on which I look from a practical as well as from a scientific point of view and which I have schematically outlined, I must add a few words dealing with the actual status of the pathologists in the various State hospitals. It must be admitted that while for the clinical men the possibilities for a better future, although not in a very large scale, are certainly open, the pathologist when he has reached the rank of first assistant physician, finds nothing to look forward to in the way of promotion, if he intends to continue laboratory work. I think that conditions should be favorably modified for a better development of the spirit of investigation necessary in a pathologist in order to avoid his transformation into a merely highly specialized technician for routine work. The attention of competent authorities should be attracted to this important point, and the position of pathologist should be made so attractive as to avoid in the future the loss of valuable men to the laboratory.

The wage schedule of the technical help should be revised in order to secure competent personnel. I have found in my survey that the best and most reliable personnel was found where the State hospital was in a position to improve the technicians' salaries through the income available on account of the city or county work done by the laboratory.

Some of the suggestions which I have offered are closely in accordance with the ideas presented by Dr. Tiffany ten years ago. It is a happy coincidence to have Dr. Tiffany discussing today some of his own suggestions. I feel very strongly that more attention must be paid to the laboratory work in our State hospital system and that all the improvements which will be adopted in regard to the equipment and organization of the laboratory and the status of the position of pathologist will be reflected into a substantial advantage for the State hospital system.

ECONOMIC LOSS ON ACCOUNT OF HOSPITAL CASES OF MENTAL DISEASE AND ASSOCIATED PHYSICAL DISORDERS IN NEW YORK STATE, 1928*

BY HORATIO M. POLLOCK, PH. D.,

DIRECTOR, STATISTICAL BUREAU, NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE

Mental disease presents many diverse problems. The one uppermost in our minds in the Department of Mental Hygiene is that of the care and treatment of patients; another continually demanding more attention is the problem of prevention; other problems less urgent but scarcely less important relate to legislation, jurisprudence, general medicine and general social welfare. Each of these problems, although related to all the others, has its individual significance and upon special inquiry is found to present many interesting phases.

This paper deals with one phase of the problem of mental disease as related to general social welfare, namely, the economic loss due to mental disease—a topic that up to the present time has received little attention from psychiatrists or economists. The paper supplements the one by the author on “The Economic Loss to the State of New York on Account of Insanity in 1911” and a more specialized study on “The Economic Loss to the State of New York on Account of Syphilitic Mental Diseases in 1917”. So far as known no other similar studies have been made.

In order to secure as definite results as possible we have limited the present study to cases of mental disease admitted to and cared for in State hospitals and licensed institutions in the State of New York in the fiscal year which ended June 30, 1928. The economic loss due to mild cases of mental disease cared for outside of State and licensed hospitals is undoubtedly large, but as so little is known concerning the number of such cases or the duration or severity of their illnesses, any estimate of such loss would be merely an unsupported guess. We deemed it better to heed psychiatric counsel and hold fast to reality as far as possible.

At the outset we were confronted with the question of the rela-

* Presented at Quarterly Conference at Albany, March 22, 1929.

tion of physical disorders to mental diseases and the proper evaluation of the two factors contributing to the disability of the patients. In several of the groups of psychoses the physical and psychic elements are so intertwined that they cannot be separated; in other groups physical factors play a less conspicuous part. Whether the mental disorder in any case is due in greater or less measure to physical factors, there seems to be no way of calculating or estimating the relative importance of such factors. No attempt is therefore made in this study to evaluate separately the physical and mental components of the illnesses which bring the patients to the hospital.

The economic loss due to hospital cases of mental disease consists of two principal items:

1. The cost of maintenance of patients in hospitals.
2. The loss of earnings due to the disability and premature death of the patients.

1. THE COST OF MAINTENANCE

The cost of maintenance of patients in hospitals comprises three factors:

A. Cost of hospital care and treatment including medical and nursing service, food, clothing, care of buildings and grounds and all the other items that are essential to the comfort and well-being of patients in a modern hospital.

B. The investment charge, which includes interest on the outlay for the hospital plant and equipment, and an allowance for depreciation.

C. The cost of general administration. In our own hospital system this comprises the expense of conducting the two administrative offices, the Psychiatric Institute, the Bureau of Special Examination, the inspection service, and the central purchase of supplies. Other items under this heading are the services for this department of the Governor, the Legislature, the Attorney-General, the State Civil Service Commission, the State Department of Public Works, the State Comptroller, the State Department of Agriculture and the State Pension Commission.

A. COST OF HOSPITAL CARE AND TREATMENT

Taking up in order these several maintenance factors for the fiscal year ended June 30, 1928, we find that the per capita cost of hospital care and treatment in the civil State hospitals was \$404.82 and in the two hospitals for the criminal insane, \$464.54. The per capita cost for the year in the licensed institutions is not available, but is estimated at \$2,000 per capita.

B. THE ANNUAL INVESTMENT CHARGE

The annual investment charge consists of two parts:

1. The interest on the value of the hospital plant and equipment necessary to house and otherwise care for the patients.
2. The allowance that must be made for depreciation and obsolescence of buildings and equipment.

To compute the interest charge we have to determine first, the value of the hospital property which forms the base, and, secondly, the rate per cent.

The last general appraisal of the land and buildings of the civil State hospitals was made as of January 1, 1912. The value of the plants was then placed at about \$32,000,000. Since that time estimates have been made yearly by the superintendents, but little consideration has been given to the enormous increase in real estate values that has occurred since the World War. The present value of the land of Ward's Island used by the Manhattan State Hospital is probably more than the aggregate appraised value of the 14 civil State hospitals in 1912.

The difficulties of an adequate appraisal or valuation of the several hospital plants being so great, we deemed it better to consider the present per capita cost of the building and equipping of a new hospital. Even this cannot be definitely determined as no complete State hospital has been built and equipped in recent years. Judging, however, from the cost of the new units at Kings Park, Creedmoor, and Rockland State Hospitals, the present average outlay for plant and equipment per patient is approximately \$4,000. We have therefore used this figure in computing per capita investment charges in both groups of State hospitals. The capital outlay of the licensed institutions per patient is estimated to be \$6,000.

Interest rates vary considerably from time to time. The average rate on first mortgages and good bonds in recent years has been about 5 per cent. On account of exemptions from taxation, government, State, and municipal bonds bear somewhat lower rates. On a purely economic basis it seems probable that 5 per cent is a fair average rate and we have used it in our computations.

The rate per cent to be charged for depreciation and obsolescence varies according to the type of building or other property under consideration. Land favorably situated does not depreciate. Certain types of equipment depreciate from 10 to 25 per cent a year. Buildings of fireproof construction depreciate but little from year to year but may become obsolescent in 30, 40 or 50 years. Wooden buildings depreciate much more rapidly. In view of our inability to segregate the values of the land and the various types of buildings and equipment constituting the hospital plants, we have arbitrarily decided to reckon depreciation and obsolescence at 2 per cent per year. This is clearly too high for the land values and too low for the equipment values, but probably represents a fair average. Combining interest and depreciation the annual investment charge would be 7 per cent of the capital outlay, or \$280 per year in the State hospitals and \$420 per year in licensed institutions.

C. THE COST OF GENERAL ADMINISTRATION

The expenditures of the administrative offices of the Department during the fiscal year of 1928 were \$350,765.21. The average daily patient population of the institutions in the Department was 52,257. On a per capita basis the expenditures amounted to \$6.71. This figure does not include any State expenditures for pensions or the expenditures of other State departments for services to the State hospitals. The exact amounts of such expenditures cannot be determined, but in view of the fact that considerable work is required of the Legislature, the courts and several departments as previously mentioned, it seems probable that the total per capita cost for administration is approximately \$10, and we have used this amount in our computations.

The several maintenance costs reckoned in accordance with the

190 ECONOMIC LOSS ON ACCOUNT OF HOSPITAL CASES OF MENTAL DISEASE

methods above described are summarized in Table 1. They amount in the aggregate to \$38,071,165.

TABLE 1. COST OF MAINTENANCE OF PATIENTS IN INSTITUTIONS FOR MENTAL DISEASE IN NEW YORK STATE, FISCAL YEAR ENDED JUNE 30, 1928

	Total	Civil State hospitals, 43,639 patients	State hos- pitals for criminal insane, 1,719 patients	Licensed institutions, 2,640 patients
Maintenance and operation.....	\$23,766,485	\$17,687,939	\$798,546	\$5,280,000
Investment charge	13,824,160	12,234,040	481,320	1,108,800
General administration	480,520	436,930	17,190	26,400
Total	\$38,071,165	\$30,358,909	\$1,297,056	\$6,415,200

2. LOSS OF EARNINGS DUE TO THE DISABILITY AND PREMATURE DEATH OF PATIENTS WITH MENTAL DISEASE

Mental disease causes complete or partial disability for long periods and materially shortens life. More than one-half of the patients who enter our civil State hospitals finally die therein. The average period of hospital life of those who die in the hospitals is between six and seven years. The death rate among patients is several times as high as among the general population of the same age distribution. From 20 to 25 per cent of the first admissions recover and from 15 to 20 more are discharged as improved. From 5 to 10 per cent are discharged as unimproved or as without psychosis.

It is probable that the loss for the year due to reduced earning power can best be determined by considering only the new cases, or first admissions, entering the hospitals. The loss thus viewed would be the present worth of that portion of the future earnings that is cut off by mental disease. The problem thus considered resolves itself into two parts:

- a. The determination of the present worth of the net future earnings of an average man and of an average woman at each age of life.
- b. The finding of the proportion of the future earnings that are lost when the patient is admitted to a hospital for mental disease.

Fortunately, we have at hand a study on the "Money Value of Life" made by Drs. Dublin and Lotka of the Metropolitan Life Insurance Company and published in the American Journal of Public Health in June, 1927. In such study the authors calculated the present worth of the net future earnings at each age of a man whose maximum gross earning capacity was \$2,500 a year. The earnings for the several working years were carefully graduated and deductions were made for the cost of maintenance. The net economic values thus calculated of a man as a producing unit at various ages are shown in part in Table 2. The data set forth the value at various ages of a typical wage-earner who probably represents a fair average for New York State. It will be noted that the value at birth is given as \$9,333; at 10 years of age as \$19,078; at 20, as \$30,200; and at 25, \$31,900, which is the maximum. At 50 the value becomes \$17,510 and at 60, 8,499; at 72, it becomes a minus quantity.

TABLE 2. ECONOMIC VALUE OF A MAN WITH MAXIMUM EARNING CAPACITY OF \$2,500
(As calculated by Drs. Dublin and Lotka)

Age, years	Value	Age, years	Value
0	\$9,333	40	\$25,795
5	14,156	45	22,000
10	19,078	50	17,510
15	25,341	55	12,900
20	30,200	60	8,499
25	31,900	65	4,400
30	31,038	70	562
35	28,750	75	-2,348

The economic value of an average woman was not calculated but was assumed by the authors to be half that of a man. We have used such assumption in our computations.

What proportion of the value of a person is lost when he develops mental disease and enters a State or licensed hospital for treatment? Estimates might be made for all first admissions or for each clinical group separately. The latter method gives a better analysis of the loss and was used in our calculations.

After careful consideration of discharges, deaths and duration of hospital life in each group we arrived at certain percentages of loss. These are set forth in the third column of Tables 3 and 4.

It will be noted that the percentage of estimated loss of future earnings in general paralysis cases is 75. Prior to the introduction of treatment by malaria and tryparsamide the percentage of loss of earnings in this group was close to 100.

As a rule the organic cases are past middle life on admission, and present a less hopeful picture than the functional cases. The percentage of loss in senile cases is placed at 95, in arteriosclerotic cases at 85, and in alcoholic cases at 50.

Although there are few recoveries in the dementia præcox group, a large proportion of the cases improve so that they are able to do some productive work. The loss in this group we have estimated at 75 per cent.

Some of the manic-depressive and psychoneurotic cases are restored to full earning power while others continue in the hospital until removed by death. On the whole these two groups are perhaps the most hopeful of all, and we have estimated their loss in earnings as only 40 per cent.

The loss in the group with mental deficiency is placed at 10 per cent as this group has low earning ability previous to admission to a hospital for mental disease.

In preparing Tables 3 and 4 we first classified by years of age the first admissions to all the State hospitals and the committed first admissions to the licensed institutions of each sex and psychosis; we then multiplied the number of patients of each age by the estimated present value of the net future earnings of an average person of same sex and age. The amounts thus derived for each psychosis were added and the totals were entered in column 2 of the tables. This column represents the net economic value of average persons of the same age and sex as the first admissions of the several clinical groups, Table 3 showing the values for the males and Table 4 the values for the females.

The next step was to multiply the amounts in column 2 by the respective percentages of loss shown in column 3. The products in column 4 of Table 3 show the losses for the males in each group,

TABLE 3. ESTIMATED LOSS OF NET FUTURE EARNINGS OF MALE FIRST ADMISSIONS TO INSTITUTIONS FOR MENTAL DISEASE IN NEW YORK, FISCAL YEAR ENDED JUNE 30, 1928

Psychoses	First admissions	Estimated net economic value of average persons of same age	Per cent of estimated value lost on admission	Economic loss due to mental disease
Traumatic	49	\$978,108	50	\$489,054
Senile	402	688,724	95	654,288
With cerebral arteriosclerosis	613	3,709,022	85	3,152,669
General paralysis	766	16,774,411	75	12,580,808
With cerebral syphilis	41	799,086	60	479,452
With Huntington's chorea	10	138,700	100	138,700
With brain tumor	8	162,043	95	153,941
With other brain or nervous diseases..	74	1,786,032	70	1,250,222
Alcoholic	455	9,430,405	50	4,715,203
Due to drugs and other exogen. toxins	17	283,684	50	141,842
With other somatic diseases	74	1,345,483	40	538,193
Manic-depressive	486	11,833,437	45	5,325,047
Involution melancholia	86	1,141,259	70	798,881
Dementia præcox	1,397	39,299,828	75	29,474,871
Paranoia or paranoic conditions....	52	1,010,102	75	757,577
Epileptic psychoses	101	2,657,348	85	2,258,746
Psychoneuroses and neuroses	67	1,801,762	40	720,705
With psychopathic personality.....	128	3,429,579	50	1,714,790
With mental deficiency	128	3,242,906	10	324,291
Undiagnosed psychoses	96	2,209,331	60	1,325,599
Without psychoses	59	1,369,376	40	547,750
Total	5,109	\$104,090,626		\$67,542,629

and the corresponding column in Table 4 shows in like manner the losses for the females.

Tables 3 and 4 take no account of the 2,135 voluntary and physician certificate cases admitted to licensed institutions, as the psychosis and age of these cases were not reported. The cases included 1,249 males and 886 females. Assuming that the average economic value of these patients was the same as that found for the cases of same sex shown in Tables 3 and 4; namely, \$20,374 for males and \$9,720 for females; also assuming that 40 per cent of such value was lost on account mental disease, we find the total loss for the male cases of this group to be \$10,178,850; for the female cases, \$3,444,768 and for both sexes combined \$13,623,618. Adding this amount to

194 ECONOMIC LOSS ON ACCOUNT OF HOSPITAL CASES OF MENTAL DISEASE

TABLE 4. ESTIMATED LOSS OF NET FUTURE EARNINGS OF FEMALE FIRST ADMISSIONS TO INSTITUTIONS FOR MENTAL DISEASES IN NEW YORK, FISCAL YEAR ENDED JUNE 30, 1928

Psychoses	First admissions	Estimated net economic value of average persons of same age	Per cent of estimated value lost on admissions	Economic loss due to mental disease
Traumatic	11	\$110,075	50	\$55,038
Senile	527	517,043	95	491,191
With cerebral arteriosclerosis	431	1,408,122	85	1,196,904
General paralysis	195	2,153,709	75	1,615,282
With cerebral syphilis.....	25	239,634	60	143,780
With Huntington's chorea	2	20,150	100	20,150
With brain tumor	2	20,825	95	19,784
With other brain or nervous diseases.	54	679,135	70	475,395
Alcoholic	86	876,273	50	438,137
Due to drugs and other exogen. toxins	15	179,002	50	89,501
Pellagra	2	26,025	70	18,218
With other somatic diseases	118	1,329,287	40	531,715
Manic-depressive	814	10,634,151	45	4,785,368
Involution melancholia	199	1,555,711	70	1,088,998
Dementia præcox	1,122	14,085,844	75	10,564,383
Paranoia or paranoic conditions	55	488,787	75	366,590
Epileptic psychoses	72	917,116	85	779,549
Psychoneuroses and neuroses	86	1,070,614	40	428,246
With psychopathic personality	75	985,440	50	492,720
With mental deficiency	118	1,519,020	10	151,902
Undiagnosed psychoses	70	773,025	60	463,815
Without psychoses	32	370,438	40	148,175
Total	4,111	\$39,959,426		\$24,364,841

the totals shown in Tables 3 and 4 we find the present worth of the loss of net future earnings of all first admissions to be \$105,531,088.

We have previously seen that the cost of maintenance of hospital cases of mental disease in this State in 1928 was \$38,071,165. Adding this amount to the present worth of the net loss of earnings of the new cases entering the hospitals we have a grand total of \$143,602,253. This amount, if our assumptions are correct, represents the loss in 1928 due to hospital cases of mental disease in New York State.

The foregoing tables also throw some light on the economic loss due to the various forms of mental disease. Leaving the volun-

tary admissions to licensed institutions out of consideration, we find the estimated economic loss on account of general paralysis cases to be \$15,757,008, and of cerebral syphilis cases \$813,588, making the total loss for the syphilitic group \$16,570,596. In 1917 we computed the loss on account of this group to be \$5,398,015. The group in 1928 was but little larger than in 1917, but maintenance costs and average net earnings have greatly increased during the past 11 years.

The economic loss on account of alcoholic cases in 1928 is found to be \$6,561,973, and that due to dementia præcox cases to be the enormous sum of \$61,907,331.

In presenting these figures we do not wish to give the impression that they are accurate to the last dollar. We feel, however, that they constitute a fair picture of the stupendous loss due to mental disease suffered annually by the people of this State.

MENTAL DISEASE IN SWITZERLAND

BY BENJAMIN MALZBERG,

ASSISTANT DIRECTOR, STATISTICAL BUREAU, NEW YORK STATE DEPARTMENT OF
MENTAL HYGIENE

Vital statistics were of but academic interest prior to the adoption of the International Classification of the Causes of Death. Without agreement upon any scheme of terminology it was obviously impossible to gather comparable statistics relating to various places or various times; nor could they be used as the basis of an organized public health movement. The same difficulties were inherent in the field of mental diseases until the combined action of the National Committee for Mental Hygiene and the American Psychiatric Association resulted in the adoption of a standard classification of mental diseases. The value of such a classification has been well demonstrated in several states, and especially so when it served as the framework of the recent elaborate census of the insane entitled "Patients in Hospitals for Mental Disease, 1923".

A point was thus reached at which it was possible to compare the incidence and types of mental disease in one state with those of any other state. Unlike statistics in the field of epidemiology, however, it has not yet been possible to undertake systematic international comparisons in mental disease. In few other nations has a uniform classification of mental diseases been adopted and fewer still make regular annual tabulations of data relating thereto. It was, therefore, of great interest to find that Switzerland not only has a standard nomenclature of mental disease but that it issues annual statistical reports with respect to the patients in hospitals for mental disease.

We are indebted to Dr. H. Bersot of Neuchâtel for a description of this system. In the "*Annales Médico-Psychologiques*" for July, 1928, he explains that an annual census of the insane entering and departing from Swiss hospitals for mental disease has been taken for over twenty years. At the close of every calendar year, each institution caring for the insane is required to submit individual admission and discharge records of each patient, corresponding in number with the movement of population for that year. The his-

tories are sent to the Swiss Federal Bureau of Statistics at Berne, where they are tabulated and prepared for annual publication. At first the system of annual reports was applied only to the cantonal institutions but for the past twenty years, the records have been required of all institutions, public and private.

The admission record is in general similar to that in use in the New York State Hospital system. In addition to the mental classification, it provides for the identification of the patient by name, sex, institution and number, the date and place of birth and of residence, marital status, number of children and their legitimacy, and number alive, dead or still-born, religion, occupation and previous history of mental disease. The section with respect to heredity is more detailed than in the New York system. A special section calls for the history of parents, grandparents, uncles and aunts, brothers and sisters and children with respect to mental or nervous disease, alcoholism, suicide and crime. The discharge record (which also serves as death record) gives name of patient, sex, number, institution, date of birth, admission and discharge (on parole or otherwise) duration of attack before admission, total institutional residence (exclusive of parole), cause of death, condition on discharge and mental diagnosis. Under condition on discharge a distinction is drawn between medical cure and social cure. The latter is defined as an "improvement sufficient to permit the patient to gain a livelihood and to live peacefully with his family or in society."¹ In addition a detailed statement is called for with respect to the destination of the patient. It is evident that the above records are kept in the form of an individual history. It would, of course, be an aid in the statistical tabulation if the data were transferred to cards, as in the New York system.

The classification of mental diseases is not directly comparable with the American standard classification. There are seven principal groups. The first called "oligophrenia" includes cretinism, idiocy, imbecility and debility. The second is called "constitutional defects" and includes the psychopaths. The third known as "simple psychoses" includes the manic-depressive psychoses, dementia præcox, and paranoia. The fourth is the group of organic psychoses

1. *Annales Médico-Psychologiques*, July, 1928, page 167.

including general paralysis, senile psychoses, arteriosclerosis, etc. The fifth group consists of epilepsy, the sixth of intoxications (alcohol) and the seventh consists of "those with no mental disease". The definitions of the various groups were provided by Bleuler.

In accordance with American practice, the first and part of the fifth groups should be excluded from the classification, as not falling properly within the field of mental disease. As defined by Bleuler, they constitute the groups cared for in the New York State Schools for Mental Defectives and in Craig Colony.

The official Swiss year book for 1927 gives the statistical results with respect to mental disease for the calendar year 1926, based upon the classifications and histories described above. Adopting a definition of first admission similar to the American standard, the Federal Bureau at Berne reports 2,553 first admissions of whom 1,298 were males and 1,255 females. Deducting the feeble-minded and epileptics we obtain 1,159 males and 1,137 females, a total of 2,296 first admissions. The Swiss population was estimated at 3,951,243 on July 1, 1926, an arithmetic increase being assumed between 1910 and 1920. On the same basis the males were estimated at 1,885,412 and the females at 2,065,831.² The first admission rates per 100,000 population of same sex were therefore 61.4 for males, 55.0 for females, and 58.1 for both sexes. In the State of New York during the fiscal year ended June 30, 1927, the following rates were obtained, based upon total first admissions to all institutions, public and private; (but excluding voluntary admissions to the latter): Males, 75.7; females, 61.3; both sexes, 68.5. It thus appears that there is a considerably greater first admission rate in New York than in Switzerland, the disparity being greater in males than in females. The proper interpretation of these facts is not quite clear, however. It is known that varying rates in the United States are not always an index of corresponding frequencies of mental disease. These may often reflect a State policy with respect to institutional accommodations. An inadequate bed capacity must necessarily limit the number of admissions. The Swiss Year Book, unfortunately, does not provide statistics of bed capacity, and it is, therefore, impossible to compare Switzerland and New York as to the

2. Estimates made in New York State Department of Mental Hygiene.

ratio of hospital beds to population. New York is not only undertaking a continuous building program, but permits overcrowding on the generous theory that the State cannot justly refuse any individual admission to a State hospital, when he is in need of such care. In comparing admission rates due regard should consequently be given to this attitude.

The Swiss year book provides a further classification of first admissions according to type of psychosis. For purposes of comparison with New York it is possible to select the following: Manic-depressive psychoses, dementia præcox, alcoholic psychoses, organic psychoses, psychopathic personality and paranoia. The first admission rates per 100,000 general population of corresponding sex are shown in Table I.

TABLE 1. RATE OF FIRST ADMISSIONS WITH CERTAIN PSYCHOSES TO ALL INSTITUTIONS FOR THE INSANE IN SWITZERLAND AND NEW YORK STATE, PER 100,000 OF THE GENERAL POPULATION OF SAME SEX

Psychoses	Switzerland*			New York State**		
	Males	Females	Total	Males	Females	Total
Manic-depressive	2.7	6.2	4.5	7.4	11.2	9.3
Dementia præcox	15.2	23.0	19.3	20.7	16.6	18.6
Alcoholic	14.4	2.2	8.0	6.2	1.6	3.9
Organic psychoses†	13.9	10.3	12.0	31.2	20.4	25.8
Psychopathic personality....	7.4	4.6	6.0	1.6	0.9	1.3
Paranoia	6.4	7.8	7.1	0.6	0.8	0.7
Total	61.4	55.0	58.1	75.7	61.3	68.5

* Year ending December 31, 1926.

** Year ending June 30, 1927.

† See text.

The first admission rate for the manic-depressive psychoses was 9.3 per 100,000 in New York, and 4.5 in Switzerland. There are similar differences in the sexes; in each case the Swiss rate is lower. It should also be noted that the female rate exceeds the male. Relatively the difference in the male rates exceeds that among females. In dementia præcox Switzerland exceeds New York with a first

admission rate of 19.3 compared to 18.6. The male rate is lower in Switzerland but the female rate is higher than in New York.

The Swiss first admission rate is also higher with respect to alcoholic psychoses; the respective rates are 8.0 and 3.9. The Swiss rate for males greatly exceed the rate in New York—14.4 to 6.2. There is also an excess in the rate for Swiss females, 2.2 to 1.6.

Under the caption "organic psychoses", Switzerland shows a first admission rate of 12.0 and New York, 25.8. These differences are reflected in the rates by sex, the difference being more marked among males. Bleuler defined the organic psychoses so as to include general paralysis, senile psychoses, arteriosclerosis, encephalitis, cerebral sclerosis and cerebral traumas. The New York group taken for comparison consisted of: traumatic, senile, cerebral arteriosclerosis, general paralysis, cerebral syphilis, brain tumor, psychoses with other brain or nervous diseases and with other somatic diseases. It seems likely that the higher rate in New York is due to the group being more inclusive. It is quite possible that many of the cases included under "other brain and nervous diseases" and "other somatic diseases" may have been placed elsewhere in the Swiss classification.

Psychopathic personality and paranoia have very low first admission rates in New York, whereas in Switzerland they not only are much higher than the corresponding rates in New York but they are higher than the Swiss rates for the manic-depressive psychoses. The question, therefore, arises as to the comparability of the definitions. In New York the classifications follow the definitions provided by Dr. George H. Kirby. The group translated above as "psychopathic personality" is called "troubles constitutionnels; psychopathies" in the original, and is defined by Bleuler as follows: "These are based upon the mental constitution itself, without belonging to any of the other categories; which, therefore, are not acquired like the types in the other groups, and which do not affect the intellectual faculties . . . Psychopathy is practically synonymous with instability, weakness . . ."³ The group called paranoia is unfortunately not separated from another group called "Psychogénies", which, according to Bleuler, includes "waves of excite-

3. *Annales Médico-Psychologiques*, July, 1928, pages 168-9.

ment of depression, delirious states following affective shocks which are habitually of a passing or temporary nature".⁴ Clearly these groups are more inclusive than the corresponding American groups, and explain, at least in part, the great excess in the Swiss rates.

The various types of psychoses may be considered from another point of view. Instead of examining the data quantitatively by relating the admissions to the general population, it is possible to secure qualitative comparisons by relating the admissions in each group to the total first admissions. The results are shown in Table II.

TABLE II. PER CENT OF TOTAL FIRST ADMISSIONS WITH CERTAIN PSYCHOSES TO ALL INSTITUTIONS FOR THE INSANE IN SWITZERLAND AND NEW YORK STATE

Psychoses	Switzerland			New York State		
	Males (1159)*	Females (1137)*	Total (2296)*	Males (4294)*	Females (3508)*	Total (7802)*
Manic-depressive	4.3	11.3	7.8	9.8	18.3	13.6
Dementia præcox	24.7	41.9	33.2	27.3	27.1	27.2
Alcoholic	23.5	4.0	13.9	8.2	2.6	5.7
Organic psychoses†	22.7	18.6	20.7	41.2	33.2	37.6
Psychopathic personality....	12.2	8.4	10.3	2.1	1.5	1.9
Paranoia	10.4	14.2	12.3	0.8	1.3	1.0

* Total first admissions.

† See text.

In interpreting the percentages one must bear in mind all the preceding strictures concerning grouping. In Switzerland dementia præcox is by far the greatest single category, exceeding even the combined group included in the organic psychoses. These are followed by alcoholic psychoses, psychopathic personality and paranoia, and the manic-depressive psychoses, in the order named. The low position of the latter appears anomalous, especially in contrast with the order in New York, where dementia præcox, though still ranking first, has a lower percentage than in Switzerland, and is followed by the manic-depressive psychoses. The high per cent of the organic psychoses in New York is due to the combination of several significant groups.

4. Ibid, page 169.

The difficulties thus disclosed raise the interesting question of the possibility of an international classification of mental disease, to be used and interpreted in a manner comparable with that of the International Classification of the Causes of Death. We are rapidly approaching the time when international comparisons in mental disease will be an important element in the public health movement. To be of any value each nation must use the same terminology with the same definitions. An excellent beginning has been made in the United States and the Swiss results could easily be modified so as to agree with the former. This, therefore, is a hopeful beginning and permits one to look forward to a future internationally-recognized classification of mental diseases.

ORGANIZATION OF A PHYSICAL THERAPY DEPARTMENT IN A STATE HOSPITAL

BY RICHARD H. HUTCHINGS, JR., B. S., M. D.,

DEPUTY MEDICAL INSPECTOR, DEPARTMENT OF MENTAL HYGIENE

Let us take as our hypothesis that physical therapy has risen to a prominence where even the most skeptical have to admit that it has value; that in every State hospital there are concomitant physical disorders among the patients that should be treated and accidents among the compensated employees where it would be an economic gain to return them to work as soon as possible; that accurate diagnoses and correct prescription are absolutely essential to unvarying success.

As the most difficult step is the start, let us consider in some detail where to begin and how.

First there must be a location for the department. In an architect's plan this may be ideally situated, depending on the architect's knowledge of the needs,* but in a hospital that has been built without this in mind we must look for a suitable location and plan to make some concessions.

The first thought will be some basement rooms now vacant or some top floor area that is not being used. The basement plan should go no further than the thought, for a damp, darkened, poorly ventilated department tends to defeat its own ends. Ground and upper floors are to be desired, keeping in mind that stretchers and wheel chairs are frequent visitors and a thought for their ingress and egress above the ground level should be in mind. In inclement weather it is preferable that many of these cases be not exposed to the elements so that the department should be housed near the service of the greatest number of patients who will have need of it.

It cannot be too strongly emphasized at the outset that physical therapy is a distinct field of practice, as much a specialty as ortho-

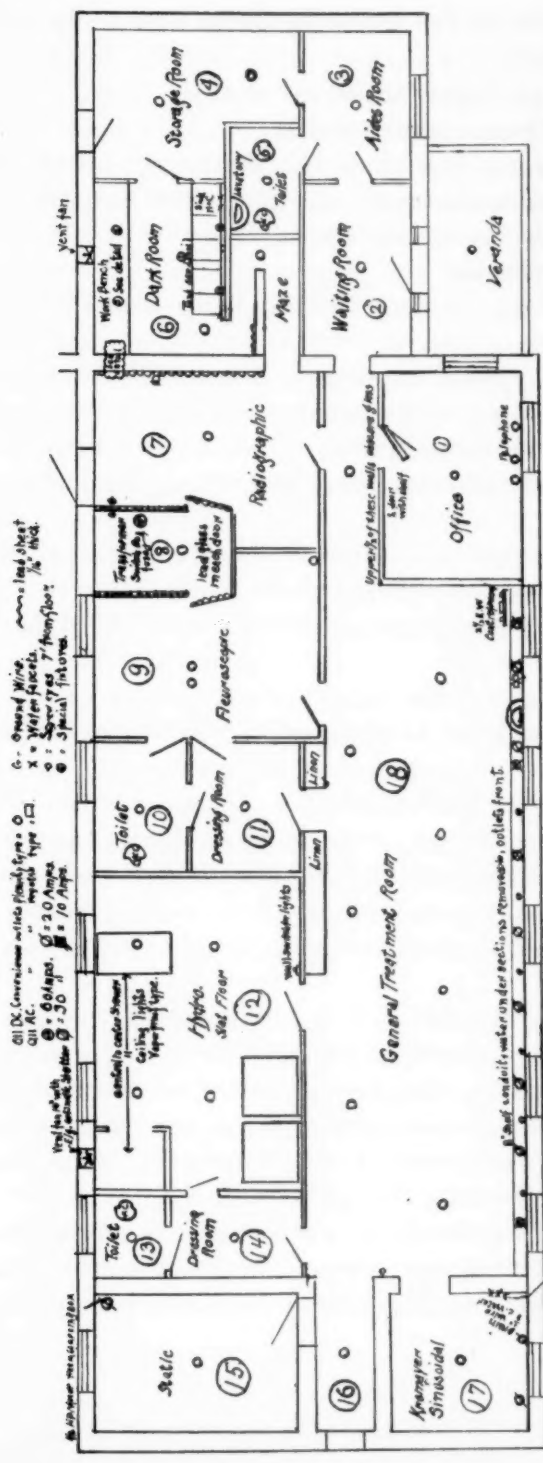
* See plan of State Department of Architecture, Division of Operating and Planning Research—Studies No. HP2F-4s; HPPD-1s; HCPD-1s; HCPDD-1s.

pedics, ophthalmology, urology, etc., so that plans for its adoption into a separate department must be made accordingly. Because of the prolonged training needed to acquire a working knowledge of the necessary combinations of its technic and the care needed in their application, physical therapy cannot be advantageously distributed among the older existing departments, as some of the uninformed would lead one to believe. Possibly the electro-coagulation of the intra-vesical growths by the urologist, and certain physical measures utilized by the dermatologist and gynecologist form the exceptions and these could better be carried out by them in the department under consideration.

"How much room is needed?" is a frequent question. The answer depends upon how complete a department is planned and how many treatments per week are estimated, always giving consideration to probable growth.

In a State hospital of 2,000 patients, after such a department had been operating for a short time the number of cases treated weekly steadily grew to 175, which was the limit of the overworked personnel. Space was originally provided for 300 treatments per week. On this basis the total area of this clinic is 1,700 square feet divided as follows:

	ACTUAL		IDEAL	
	Dimensions	Area, square feet	Dimensions	Area, square feet
Office	8' x 10'	80	10' x 12'	120
Examining room	4' x 7'	28	8' x 10'	80
Linen and storage room	8' x 10'	80	8' x 10'	80
Patients' dressing room	12' x 11'	132	10' x 15'	150
Hydrotherapy room	12' x 18'	216	12' x 30'	360
Thermotherapy room	none		10' x 24'	240
Main treatment room	12' x 36'	432	20' x 25'	500
Static room	8' x 10'	80	12' x 15'	180
Ultra violet room	8' x 8'	64	12' x 15'	180
Aides' rest room	8' x 10'	80	12' x 15'	180
Waiting room	10' x 6'	60	10' x 12'	120
X-ray room	12' x 35'	420	special	
Total		1,672		2,200



Physical Therapy Department.

- | | | | | | |
|---|--------------|----|---------------|----|------------------------|
| 1 | Office | 7 | Radiographic | 13 | Toilet |
| 2 | Waiting Room | 8 | Transformer | 14 | Dressing Room |
| 3 | Aides Room | 9 | Fluoroscopic | 15 | Static |
| 4 | Storage Room | 10 | Toilet | 16 | Hall |
| 5 | Toilet | 11 | Dressing Room | 17 | Kromayer & Sinusoidal |
| 6 | Dark Room | 12 | Hydro | 18 | General Treatment Room |

March 23, 1927
Drown at
Treed.
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A complete department on this basis should contain in the order of their most frequent use:

1. At least two ultra violet lamps, air cooled.
2. One ultra violet lamp, water cooled.
3. Two high frequency machines for diathermy, direct and indirect, fulgeration, autocondensation and electro-coagulation (one preferably portable for use on wards).
4. One infra red generator.
5. One carbon arc lamp or deep therapy lamp with 1,500-watt blue bulb.
6. Hydrotherapy in special vaporproof room with forced ventilation to outside containing electric cabinet bath; Baruch control table with Leonard thermostatic mixing valves, thermometers and pressure gauges for needle shower, spray and scotch douches; marble top massage table.
7. One electric blanket for elimination treatment of bed patients too ill to be moved to the department.
8. One low frequency generator, galvanic-sinusoidal or Morse wave machine.
9. One electric vibrator with full set of vibratodes.
10. Static machine, at least 16-plate, with insulating stool and wicker chair.
11. X-ray apparatus for radiotherapy.
12. Arm and leg baker, electric, with thermometer and slings.

The actual problem of arrangement is practically that of eliminating all unnecessary movement on the part of the aides. Sheets on wires seven feet high or solid partitions may be used between treatment tables.

In respect to the X-ray apparatus, it would be economy of course to have a radiographic department in conjunction with the physical therapy department so that radiotherapy could be accomplished with the same apparatus and inasmuch as the X-ray equipment in a State hospital is rarely overworked, the director of the physical therapy clinic could also include this in his duties.

Arrangement for current should be made and it is advisable to have both direct and alternating current in the department. A small rotary converter for each machine is not satisfactory and a

motor generator of at least 5 k. w. capacity should be installed where it will have good ventilation and clean air.

The following machines need alternating current: All high frequency machines, sine wave apparatus and X-ray.

Those which require direct current are ultra-violet lamps, electric vibration motor, polysine apparatus, motor for static machine and motor for repair room (if this is included).

All others can be arranged for either current which is supplied from the house mains.

A separate panel box for the mains should be housed in the department with an allowance of 20 amperes for each machine except the electric cabinet bath which draws 50 amperes and the X-ray machine which should be allowed 100 amperes. This should be in the department and readily accessible and have fair illumination in case of emergencies and contain all the fuses for the clinic.

Direct current and alternating current can be supplied to each booth through well plates, the direct current plates should be of the polarity type, and if the conduiting is carried low, a small shelf over it prevents unsightliness and the work of putting it back of the plaster as well as providing a very handy place on which small articles may be laid. It should be so planned that not more than two machines are on the same circuit.

An ample supply of hot water must be assured at all times for the hydrotherapy equipment and, as the usual domestic supply cannot be depended upon for this purpose, a separate heater has been found a necessity and should be located in the basement of the clinic as its radiation in summer would be unbearable in the working space.

It might be added here that the largest size of Leonard thermostatic mixing valves should be used in the control table in order that sufficient water under enough pressure be supplied at the needle shower and spray heads and at least a three-inch floor drain direct to the sewer should be installed. The usual pressure can be increased by the use of a booster pump to at least 70 pounds per square inch. It will be found that a flow of at least 40 gallons per minute at 40 pounds pressure is required.

A repair room must be included in the estimate as emergency

repairs are often a necessity and the hospital mechanics are not apt to be versed in the theory and operation of these special machines so that repairs fall to the chief aide or physician in charge. Its degree of completeness depends on local conditions and the distance from large population centers or instrument works.

To those to whom a physical therapy department is still somewhat of a mystery, the following list of appurtenances for the various divisions is a suggestion. Intimate details such as pens, pencils, penholders, trays, wire baskets for charts, waste baskets, desk blotters, etc., have been omitted for brevity and because the personal equation varies with each installation and chief of department.

WAITING ROOM

- 1 Bench, 6' long, oak, heavy
- 4 Chairs
- 1 Cuspidor
- 1 Rack for umbrellas

OFFICE

- 2 Baskets, letter, wire
- 1 Basket, waste, wire
- 1 Cabinet file, metal, legal sheet size, 4 sections
- 1 Chair, swivel, arms
- 1 Chair for typist, swivel without arms, spring back
- 1 Clock, wall
- 1 Costumer
- 1 Desk, flat top, double pedestal, oak
- 1 Desk, typist, single pedestal, disappearing 1/2 top, oak
- 1 Fan, oscillating, electric
- 1 File, card index, 3" x 6", 6-drawer section
- 2 Holders, blotter, desk
- 2 Lamps, desk, electric with hoods
- 1 Machine, stapling
- 1 Perforator, Marvel
- 2 Rulers
- 1 Sharpener, pencil
- 1 Sphygmomanometer

- 2 Stamps, rubber, date
- 1 Stamp, rubber, special set
- 2 Trays, pen, glass
- 1 Typewriter

EXAMINATION ROOM

- 1 Costumer
- 1 Lamp, hooded
- 1 Plinth
- 2 Stools
- 1 Table, 2' x 2', oak, 30" high

LINEN ROOM

- 2 Baskets, laundry
- 10 Blankets, gray
- 100 Cases, pillow
- 50 Gowns, dressing, cotton
- 10 Mattresses, 28" x 72", rubber cloth covered
- 50 Pajama suits, cotton
- 10 Sheets, black rubber
- 100 Sheets, muslin
- 120 Towels, hand
- 60 Towels, bath
- 24 Towels, Turkish, large

PATIENTS' DRESSING ROOMS

(2 provided for)

- 2 Baskets, wicker
- 2 Costumers
- 4 Chairs, wood, straight, no arms
- 2 Benches, oak, 6 feet long

MAIN HYDROTHERAPY ROOM

- 1 Basket, wicker
- 1 Chair, wood, straight, no arms
- 1 Sink, slop, with drainage trap
- 1 Table, metal, white enamel, 24" x 24"
- 1 Timer, interval, Victor

GENERAL TREATMENT ROOM

- 9 Plinths, or treatment tables, wood, heavy, with shelf 1 foot from floor, 28" wide, 72" long, standard legs 30" to be varied to suit masseur
- 1 Plinth as above, 18" high for air-cooled ultra violet lamp
- 12 Stools, wood, white, 1 foot high
- 10 Timers, interval, Victor or Hawkeye
- 4 Chairs, straight
- 2 Cabinets, instrument, glass sides above, metal cupboard and drawers below, white enamel
- 2 Tables, metal, white enamel, 48" x 24"
- 2 Cans, waste, W. E. sanitary
- 2 Basins, foot, monel metal
- 2 Basins, hand, monel metal
- 5 Basins, surgical, monel metal, assorted sizes
- 3 Shakers, salt
- 1 Shears, large
- 2 Scissors, pairs
- 1 Scissors, bandage
- 1 Sterilizer, Castle electric, large, automatic
- 1 Handle for vacuum electrodes
- 5 Electrodes, glass, vacuum, assorted
- 9 Electrodes, glass, non-vacuum, assorted
- 2 Handles autocondensation
- 1 Pad autocondensation
- 1 Handle, fulguration, with 3 needles
- 3 Sets rheophores, cotton covered
- 2 Sets rheophores, rubber covered
- 1 Rheophore, rubber with spring clip for handles
- 1 Set pads for Morse wave or polysine, rubber back
- 1 Set electrodes, muscle testing
- 1 Roll (5-lb.) Crooks metal (22 gauge)
- 1 Set metal mesh, electrodes, assorted sizes
- 1 Applicator, quartz, intra nasal, Brooks
- 1 Applicator, quartz, pharyngeal, Baldwin
- 1 Applicator, quartz, intra nasal, Muehler
- 1 Applicator, quartz, pharyngeal, Plank

- 1 Applicator, quartz, hayfever, Sampson
- 1 Applicator set, quartz, pyorrhea, Sampson
- 1 Applicator, quartz, lens large
- 1 Applicator, quartz, lens small
- 1 Applicator, quartz, hemorrhoid
- 2 Trays, white enamel
- 6 Pairs goggles, glass (amber)
- 2 Pairs goggles, Welder's

STATIC ROOM

- 1 Motor, $\frac{1}{2}$ to $\frac{3}{4}$ horsepower 110-220 V. D. C., with constant speed control rheostat and cone pulley
- 1 Table, oak, 2' x 2'
- 1 Chair, oak, no arms
- 1 Interval timer
- 2 DeKraft blue pencils for effluve
- 1 Set static applicators
 - Several lengths of chain, brass flexible
 - Several assorted sizes crooks metal electrodes

MECHANO-THERAPY ROOM

- 1 Complete set of apparatus, Bott or Tait McKenzie model or equivalent
 - Sufficient tables, wood, long and narrow, for all hand apparatus
 - Chairs sufficient for all hand machines
 - (Partitions are not needed in this room)

AIDES' REST ROOM

- 3 Chairs
- 1 Couch, wicker or leather
- 1 Table or plinth
- 1 Electric stove, small plate
- 1 Mirror
- 1 Electric fan

ACCESSORIES AND STORE ROOM

- Crooks, metal 22 gauge, 10 lbs.
- Treatment cords, red and green for galvanic, 6 pairs
- Gauze, hospital size, 2 rolls
- Ivory soap
- Absorbent cotton
- White enameled cans for sterile dressings
- 1 Sphygmomanometer
- 1 Dynamometer
- Bandages
- Fahnestock clips, 24
- Extra set of sheeting curtains, if these are used
- Dry cells
- Glycerine, 4 ounces
- Rubber gloves
- Carton 60-watt bulbs for electric cabinet bath, not frosted
- Elastic woven bandages
- 5 Pounds salt
- Split connectors, 12
- Bifurcated connectors, 12
- Adhesive plaster, roll
- 1 Can commercial ether, 1 quart
- 1 Can gasoline, 1 quart
- 1 Can brass and nickel polish

REPAIR ROOM

- 1 Work bench, substantial
- 1 Vise, 4" jaws
- 1 Set electrician's tools
- 1 Set mechanic's tools
- 1 Set watchmaker's tools
- 1 Set magnetic testing tools
- 100 Feet No. 18 reinforced twisted lamp cord
- 3 Rolls, rubber tape
- 6 Rolls, friction tape
- 6 Switches, C. H. or type used

50 Feet No. 18 light insulated fixture wire

Hubbell receptacles

Hubbell sockets

Hubbell plugs, polarity

- | | |
|--|--------------------------------|
| 1 Volt meter, alternating current, 0-150 | } Weston portable
with cord |
| 1 Volt meter, direct current, 0-300 | |
| 1 Ammeter, direct current, 0-15 | |
| 1 Ammeter, alternating current, 0-15 | |
| 1 Test lamp | |

The equipment for repair room depends of course, on the elaborateness with which it becomes necessary to equip it.

Now that we have our department laid out and fully equipped it becomes necessary to man the organization. Much of the success of a hospital physical therapy department will depend upon the man who is selected to direct it. Successful therapeutic results will depend not alone upon the medical knowledge of the director but to a great extent upon his experience, tact, and executive ability. He should be a physician who has had special training in this line;* and who should see each new patient, diagnose the condition, prescribe on the chart the kind, degree and duration of each treatment; examine each case under treatment at least once a month with the dressings removed and note whether the treatment should be continued or changed. He also should see each case that has reached the stage of maximum improvement and write the discharge from the department with the result on the chart and should supervise treatment given by aides to insure accuracy of technic and general efficiency.

He should have prepared on the first day of each month a detailed report of the clinic's activities during the preceding month.

He should sign all requisitions for equipment and supplies and all communications from the department.

He should have full control and discipline of personnel and patients during clinic hours.

These duties should not be undertaken by anyone but a physician.

* Intensive courses of lectures and training are frequently given throughout the larger cities by specialists in this branch of medicine where the physician may obtain a fair working knowledge. Also there are several recognized schools where a more thorough course may be taken.

Next in rank is the chief aide, preferably a registered nurse who has had special training in a recognized school of physical therapy and who is licensed from the State Department of Education to practical physical therapy. On him (or her) devolves the duties of arranging a schedule for each treatment, keeping a record of all treatments for a monthly report of the department, supervise all treatments, observing that the application of the modality, electrodes, temperature, distance, time, etc., are according to prescription; assign aides to treatments in accordance with their qualifications; call a meeting of all aides at least once a month to discuss matters that might increase the efficiency of the clinic.

To assist in this work there should be a certain number of physical therapy aides, their number depending on the number of treatments per week given. Practical trial proves that 20 to 22 physical treatments of all varieties constitute a fair day's limit of an aide's physical powers.

It has been found advantageous to use a pupil nurse assigned to the department for a period of one to two months who thus not only rounds out her course of training but also assists in making sterile bandages, and in undressing and preparing patients for treatment. Furthermore she should follow the aides about, become acquainted with the apparatus, and learn some of the simpler uses of the same. A reliable patient should also be assigned to the department to assist in keeping the place ship-shape. In order to give 300 treatments per week it will be found necessary to have 1 chief aide, 2 assistant aides, 1 office assistant.

So far nothing has been said about records. Efficient administration requires a scheme of record keeping which should fit in with the remainder of the hospital service. A system for State hospitals is being worked out at the Utica State Hospital which consists of a letter-size sheet ruled in quarter-inch squares with every seventh line a double red one. There is space at the top for date and space at the left-hand margin for treatments.

Each treatment is covered by a rubber stamp which is affixed to the record at the time of the first visit and diagnosis by the physician in charge. At each treatment the aide initials the square corresponding to the date so that when the monthly record is compiled

is meant. Other more elaborate systems of record keeping have been devised by the United States Government and can be obtained from the Veterans' Bureau, New York City. The proper maintenance of these records requires at least part time of a stenographer or typist.

No department in any hospital can fulfill its complete service without the cooperation of all the hospital physicians and to this end it is essential that they should be at least superficially acquainted with the various modalities and their reactions, and until they are familiar with this special branch they should not attempt to prescribe but consult or confer with the physician in charge of the department who should write the actual prescription.

In conclusion let me quote from Dr. Coulter, "It is to be remembered that we must not let enthusiasm for a new idea make us believe that we have a cure-all in physical therapy, but it is to be recognized that a modern hospital must provide all the scientific methods for aiding cure, shortening temporary and preventing permanent disability."

New York City, December 8, 1928.

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COMMON PRINCIPLES IN PSYCHOLOGY AND PHYSIOLOGY,* BY JOHN T. MACCURDY, M. D.

ABSTRACTED BY GEORGE S. AMSDEN, M. D.

Readers of the *Psychiatric Quarterly* are many of them familiar with Dr. MacCurdy's *Problems in Dynamic Psychology* and *Psychology of Emotion Normal and Morbid*. Not a few will recall the author personally, for he was associated with the New York State Psychiatric Institute during the directorship of August Hoch. He also edited Hoch's posthumous book *Benign Stupors*. Dr. MacCurdy's contributions have been such as to raise expectation concerning anything he publishes.

The present volume, as the title indicates, seeks to define certain general principles which he thinks are valid, both for physiology and psychology. He is further of the opinion that a recognition of these principles would do much to break down the unfortunate barriers which now tend to separate these two great disciplines. A familiarity with these principles, the author believes, would enable the physiologist to recognize in psychology an extension of his own body of knowledge developed in an orderly way, and the psychologist would appreciate in the data of physiology the necessary foundations for the superstructure to which he devotes himself. The physiologist and the psychologist would thus see themselves working at the same great biological problem, but at different levels between which there is no essential conflict.

He does not minimize the difficulties of his task. He recognizes clearly that even among psychologists no one has framed a basically sound psychological theory. He assumes that the reason for this is that either the phenomena dealt with by the psychologist belong to unrelated categories, or that they are not unrelated, but that the vocabulary employed in one category does not serve the facts in another. He is inclined to the latter alternative and seeks means by which he may express a unity postulated to underlie all psychological interests as well as those common to psychology and physiology. "The primary object of this book is a suggested vocabulary in which the principles common to reflex action, to instincts,

* Published by University Press, Cambridge, England, 1928.

and habits, to conscious and unconscious mental activities may be expressed."

Among other difficulties to be reckoned with are certain features inherent in the modern scientific manner of thinking. To bring one of these into focus he quotes A. N. Whitehead (*Science and the Modern World*. "During the epoch in question (nineteenth century), and indeed also at the present moment, the prestige of the more perfect scientific form belongs to the physical sciences. Accordingly, biology apes the manner of physics. It is orthodox to hold that there is nothing in biology but what is physical mechanism under somewhat complex circumstances." In other words, thoughts are assumed by the modern scientific mind to be epiphenomena and to have no existence apart from the realities found in words, signs, and the physiological processes which give rise to them. He again quotes Whitehead. "We are now so used to the materialistic way of looking at things, which has been rooted in our literature by the genius of the seventeenth century, that it is with some difficulty that we understand the possibility of another mode of approach." The author reminds the strict scientist that, while in his scientific moments he has no place for thoughts themselves as realities, in his ingenuous moments he assumes the reality of thoughts and conducts his life under this assumption. This is merely another way of illustrating the presence of a bulkhead between psychology and the physical sciences.

The author recognizes as another difficulty the fact that in approaching his problem he must deal with abstractions. These abstractions are unlike those of mathematics. The abstractions of mathematics intentionally ignore certain properties of substances which give material representation to mathematical entities. For example, "so long as the properties he is interested in are present, all others can be neglected, just as we neglect the color and habits of cows when counting the number of them in a herd." The abstractions of mathematics are those of relationship in time and space. They are derived logically rather than by experience. Moreover, the practical results of mathematical deductions have been so far-reaching that the immateriality of mathematical data has been somewhat obscured. The author suggests that, if in biology a some-

what similar process of abstraction could be carried out, biology would advance as have the physical sciences. But, unlike the physical sciences whose basic units are simple and stable, the biological sciences have to do with quality more especially than quantity. "Moreover, since the essence of life is adaptation, the reactions of living matter are never stable; patterns are changing, slowly in the sphere of bodily form as exemplified in evolution, and rapidly in the sphere of behavior. For these two reasons, he who tries to abstract and control living processes arrives at units that are neither simple nor stable; his task is from the outset more difficult than that of the mathematician."

The principles the author seeks to elucidate involve abstractions somewhat difficult to grasp. "If these were put into terms of physics and chemistry the correlation, essential for a broad biological theory, would disappear. So I propose to assume that immaterial agencies, which I shall call patterns, do guide and, in that sense, control the physico-chemical processes involved in all living (matter)." The book, therefore, has to do with his conception of "patterns". The first half of the book is devoted to a study of psychological patterns; the second half deals with physiological patterns.

Essential to an understanding of the author's conception is a clear appreciation of what he is pleased to call an "imaginal process". When an organism, or even an organ, displays a modification of behavior due to previous behavior or experience, as if it remembered it, there is involved a "something" of basic importance. This primitive modifiability seen in the simplest organisms is but the beginning of an evolutionary series at the other end of which stand conscious images and thoughts. This capacity "for registration and reactivation of experience," the author chooses to express by a designation that will emphasize the immateriality of it. He, therefore, speaks of it as an imaginal process. Essentially this same principle has been called *Bahnung* by Exner, *associative memory* by Loeb, *conditioning* by Pavlov, and *engraphy* by Semon. The author claims that his formulation is novel chiefly by the adoption of "a psychological terminology for something that has a wide biological significance." He calls attention to the fact that his imaginal process is very similar to Semon's *mneme*. "Semon's

theory is, however, materialistic in its tendency, while mine is just the reverse. The impress of experience, according to Semon, is some kind of a physical alteration of protoplasm, an effect, too subtle perhaps for demonstration with present-day technique and, therefore, known only by its modification of function, but nevertheless a material change," to designate which by a term like "memory image," which suggests a conscious phenomenon, would, Semon says, be a mistake. The author for this very reason chooses a label which will suggest something psychological. Semon reduces his *mneme* to physio-chemical phenomena, in accordance with the mechanistic theory. The author objects that it is impossible to conceive of producing aesthetic values by physico-chemical processes. "Values, of any human order, belong to a different category from that comprising phenomena that engage workers in laboratories. If one analyzes values, a process which is purely psychological, the factors that emerge remain permanently in the mental, or at least biological, sphere and never become physical except by an act of faith, similar to that of Semon's."

This capacity for registration of past experience and for a reactivation of it at the psychological level may or may not involve consciousness. If, for example, on the appearance of a white horse a person were observed to become regularly grossly agitated and were then to indicate by his behavior the presence of the horse it would be fair to conclude on this objective evidence that there was involved some sort of reproduction of past experience. It might, perhaps, be only slightly hazardous to say that there was involved an image—a conscious image of a past experience. If, again, on the appearance of a white horse a person were observed repeatedly to become a bit uneasy it would be fair to infer that there was here, too, involved a reproduction of past experience, but that the person might not be conscious of it. The past experience in this latter case might be said to function in the present on the stimulation provided by the presence of a white horse. This stimulus then would be regarded as leading over directly to a specific reaction of uneasiness, with the elimination of many of the detail reactions of the original experience. "This kind of reproduction which is betrayed solely by behavior we will call 'image function'. It may effect con-

sciousness as a true image, or it may remain wholly unconscious; the use of the term, image function, implies nothing whatever as to the presence or absence of introspective awareness. It is something known only by its effects; it is, so to speak, a stimulus that is not materially present." Image functions, outside of introspective awareness, the author has already dealt with in his book on *Psychology of Emotion*. He has come to the conclusion that the peculiar experience spoken of as affect is determined by such image functions which Morton Prince has called co-conscious images.

Another aspect of the imaginal process is brought out when we go through the act of learning. For instance, if one starts to learn a series of unrelated words, it is observed that as one proceeds less and less hint is necessary for the reproduction of the next word in the series. Finally after the first stimulus word is given the other words in order spontaneously occur one after the other. One word is then a stimulus to the next. At this point there is a complete image function of the next word. Before this perfected image is attained the image of the next word is gained by a mere hint, perhaps even only the first letter of the word. Such an incomplete image function the author speaks of as a liminal image. The threshold for the next word has not yet quite fallen to zero as it has when the image function is completed.

Images or image functions in the author's sense are psychological elements—the simple mental elements—out of which eventually the structure known as the mind is built up. The grouping, combining, or integration of these elements, so that there results a response sequence which serves the organism, follows an orderly course. This orderly course the author designates as a pattern.

The development of this conception with the author came in the course of his psycho-pathological studies. In the case of normal persons, as thinking becomes undirected and takes on a random character, it is observed that there is still, nevertheless, discernible a definite system of grooves into which the random thoughts run. This is the conception back of the theory of free associations, the importance of which Freud early recognized and has so pregnantly elaborated. Much controversy has centered about this topic of free association, in part because such free associations so frequently

lead to topics about which society has thrown a taboo, which topics we are inclined to dodge as we instinctively dodge an automobile we suddenly discover coming toward us. Owing to these reasons there has been much prejudiced discussion concerning the inferences drawn from free association. The author, therefore, turns from evidence which might be obtained from this source to inferences drawn from psychopathological material where ingenuousness must be conceded. In the talk of hypomanic and manic patients is to be found the same tendency as that observed in random thinking and free association—namely, a tendency to group the expressed thoughts about definite interests. This is what is commonly referred to as a “trend”. The agencies by which this is brought about the author speaks of as patterns which he regards as instinctive and underlying our conscious life. “With our multi-form capacities of adaptation to a constantly changing environment and with our subjective experience of volition, it takes a peculiarly honest and penetrating introspection to detect the presence in our mental life of a foundation of set modes of reaction, but when both psychopathology and genetic psychology have demonstrated its probability, introspection can go a long way towards confirming the theory.” The random thinking just indicated, guided by trends or patterns, is a primitive type of thinking. Not the least important result of psychopathological investigation is the hypothesis that this type of thinking may go on outside of the awareness of the individual.

In a chapter on the “Construction of Primitive Mental Patterns,” the author discusses the chain reflexes of Exner as elaborated by Loeb and later modified by the behaviorists. The chain reflex is illustrated by the act of swallowing. A bolus of food is pushed by the tongue into the gullet; this stimulates a contraction of the muscles behind it and the bolus is pushed onward; this onward position of the bolus stimulates a further contraction of the muscles in the new segment and behind the bolus; the bolus is moved still farther onward and the process is repeated. In its applications to more complicated behavior it is obvious that the chain reflex leaves the animal at the mercy of the environment and does not account for a selection of stimuli which the reacting animal clearly pre-

sents. The modification introduced by the tropisms of Loeb apparently makes this theory more flexible. The behaviorists sought by means of the conditioned reflex to gain for the chain responses an independence of the environment. A dog, which after having been given food a few times, and at the same time hears a bell sounded, will shortly salivate on hearing the bell when the food is not offered. That is, the animal has come to react when the bell rings as if the food were brought. The necessity for the presence of the food is elided, or, in the author's sense, has become an image function. When the dog salivates in reaction to food this is seen to be a detail of the general orientation to food, which the sound of the bell also precipitates. The sound of the bell and the presence of food are both stimuli which bring about orientation to food. When there are conditioned together reactions different in kind, another element is to be taken into consideration. This element is the role played by the proprioceptive system—i. e., those sensory nerves involved in transmitting the effect of changes within the body. The felt changes within the body, associated with an external stimulus, may, if a response of another sort is repeatedly experienced at the same time, serve as a conditioning element, so that as a result an external stimulus of one sort may be followed by a conditioned response of quite a different kind, and totally in the absence of a stimulus appropriate for this latter different kind of response. The degree to which this may go is illustrated by the reaction of dogs accustomed to injections of morphine. Such dogs eventually, at the sight of the hypodermic syringe, display nausea, the natural effect of morphia in dogs, after which the dogs go to sleep as if they had actually been injected. In this way it is clear that proprioceptive reactions are able by a process of conditioning to bring about reactions in the absence of the appropriate external stimulus of these reactions. The author calls attention to the fact that, though this is so, the pattern is still imperfectly integrated, i. e., the response is still a chain response. A repetition of a series of reactions is brought about so that it runs off smoothly. But it runs off only if each reaction in turn occurs, or, if it does not actually overtly occur, it develops to such a point as to produce proprioceptive stimuli which are, none the less, units in a chain. The author indicates that a completely

integrated pattern is one made evident by the fact that a "given objective stimulus leads in overt action, not to its own proper response, but to a reaction belonging to a later stage in the chain. The whole series of actual responses no longer needs to be rehearsed in actual movement," if the pattern is completely integrated. The issue with the behaviorists is, in the face of these facts, the author thinks, squarely set. It boils down to this, in his mind. Can proprioceptive stimuli become eliminated in the sense that they become imaginal processes? If not, psychology might justifiably rest on a mechanistic foundation. If a proprioceptive stimulus can become an imaginal process, then "behaviorism is only a useful method of studying animal behavior and not a defensible system of psychology."

In a discussion of this, the author analyzes a study of W. S. Hunter in *The Delayed Reaction in Animals and Children*, and claims that from these experiments it may be shown that in raccoons and children proprioceptive stimuli, begotten in muscular states of orientation to food, may recur after the muscles have been engaged in other responses, so that the subject, without other guidance, regularly goes directly to the food, under the conditions of the experiment, as if the orientation state had been constantly maintained. If then such proprioceptive stimuli may gain imaginal representation in the author's sense, it is clear "that proprioceptive stimuli arising from one reaction may become conditioned stimuli for the next in the chain. If, now, these proprioceptives can also have an imaginal reproduction, an imaginal reaction may become the effective stimulus for the next. If this, in turn, be imaginably reproduced, an increasing portion of the total pattern may exist only as image functions of both external stimuli and the reactions to them." In this way the author finds constructed his completely integrated pattern. He adds, "If we now assume that conscious awareness such as man enjoys be directed to these inner events then introspection will discover a train of images."

Yet, however complicated such patterns may be, "they are discriminative only in the sense that they may exist in large numbers as modes of reaction to a large number of slightly varying situations. But, by themselves they cannot produce new behavior.

Such patterns stand at the instinctive level and by them alone one is quite unable to explain all of human behavior.

It is quite obvious that behavior which takes place simply in accordance with an imaginal process alone, i. e., behavior which occurs in response to a stimulus not there, runs the risk of being indistinguishable from a response which we call an hallucination. For instance, a dog which simply salivates when it hears a bell is behaving as if it hallucinated food. If he runs to get food on hearing the bell the reaction would be adaptive. In the latter case, the stimulus may be regarded as leading to other image functions and to the activation of a pattern, with the result that the dog is brought to real food. That imaginal processes or images be useful and not deceptive some facility for discriminating images as images is necessary. This the author states is the function of consciousness. "It is a capacity to discriminate between stimuli arising in the present environment and stimuli occurring as reproductions or elaborations of past experience. The discrimination is evidenced by the reproduced experience being utilized as a goal and not as a stimulus for an immediate and direct response thereto." It is not a fixed, unchangeable function. "It is, rather, a kind of function that marks a stage in evolution, one that can go on to higher and higher development with elaboration to include self-consciousness, utilization of abstract thinking and so on. Like intelligence itself, it is something that has a gradual growth."

In a chapter on "Evolution of Intelligence," the author seeks to "reconstruct the probable stages in the evolution of intelligence from the initial stimulus and response level, where modes of reaction are rigidly fixed, to the level of specialized ability we call planning. Specifically, we seek to discover the steps taken in substituting indirect reactions for immediate response and the increasing guidance of these by the desired end." The first stage is that displayed when the animal, in a quandary, exhibits, somewhat at random, reactions more or less habitual. One such reaction may be successful. It is, therefore, conditioned and a pattern is thus formed so that henceforth the animal meets a similar new situation adaptively. In the next stage the animal, in the absence of means of gaining its end by habitual means, employs some other means

suggested by the environment, in place of the habitual one. For example, if an ape has come to use a stick to bring fruit within its reach, and no stick is at hand, instead of seeking a stick, it is apt to employ other things such as straw, a stone, or a blanket, as it would a stick. In both these stages the animal is dependent upon the chance presented by the environment. In the third stage, there is seen a combination of reactions previously employed for a given end, but now neither alone sufficient. The combination of the reactions may, as in the first stage, be brought about by chance and then, being conditioned, thereafter be employed regularly. There is here seen something of the nature of prevision of the desired end, Apes, for instance, having two sticks, neither of which is long enough to reach fruit desired, hold them together. There is thus formed an optically longer stick, but, of course, not serviceable. An instance is given of an ape observed by Koehler, which had two sticks which could be joined. In attempting to get its fruit, it chanced to slip one stick into the other, thus joining the two. Thereafter, the animal regularly reached for the fruit after having joined the sticks together.

The last stage of evolution of intelligence is seen in true planning. In planning, the goal is imaged and the trial and error process is carried out in the imagination. Essentially the same types of processes of trial and error occur as are seen in the previous stages, but the fitness of any means to the end is tried out imaginally. If it seems in this way to suit the end, overt action follows. Consciousness in this case performs a critical, rather than a creative, function. The author cites an example of planning from the life of Pasteur. Having noted John Herschel's correlation between right and left-handed crystals, and the right and left-handed rotation of polarized light by their solution, Pasteur occupied himself with the tartrate of sodium and ammonium. The tartrate and the paratartrate were apparently identical in their chemical properties and differed in their physical properties only by the action of their solutions on polarized light. The tartrate is dextrorotary, the paratartrate neutral. He formulated the hypothesis that the tartrate crystals might be right or left-handed, but the paratartrates he felt must be symmetrical. "This is no greater achievement than the

combination for the first time by a chimpanzee of climbing on a box and reaching for some fruit with a stick. Consciousness had to play its part and it was here that Pasteur's genius was demonstrated." He tested out his hypothesis but he found that both the tartrate and paratartrate crystals bore dyssymmetrical facets. Dismayed, he worked still more eagerly. Under the microscope, he found that the paratartrate crystals were some right and some left-handed. He separated them and found that solutions of the right-handed crystals turned polarized light to the right and those of the left-handed crystals turned it to the left. The paratartrate was neutral because it was made up of mixed crystals. This experiment, so important in the history of modern physical chemistry, yet differs little in nature from the combining reaction of the ape, except that it was carried out largely in imagination.

The author devotes a short chapter to the evolution of such "drive", as, for instance, actuated Pasteur somewhat feverishly to carry through his investigation of the tartrates. It is an instinctive pattern which leads a hungry animal to take food. The food may be smelled and then hunted for; or the seeking of food may arise from visceral disturbance. In the latter case, when the behavior is initiated by something within, the author speaks of the presence of an appetite. Conditioning of digestion, eating and food getting brings it about that the stimulus for seeking food may come from within as well as from without. The transference of the inciting stimulus to a source within the body is thus readily understood. We can, however, scarcely yet understand the "drive" displayed in scientific research. The author derives these drives or interests from the appetites much as the appetites are derived from visceral disturbances. Unsatisfied appetite leads in man to a restlessness or to an imaginal activation of more and more patterns, or to both. If an appetite is thus often aroused and not satisfied, an increasing system of imaginal patterns is gradually integrated. As this grows, the more is some detail of the environment likely to correspond to some detail of the pattern system, and in consequence there is a chance for an overt response to a real stimulus, with some satisfaction resulting, but there is a large part of the pattern system still unsatisfied. This the author speaks of as "instinct-motivation."

"If consciousness is directed to this constellation of imaginal patterns, fantasy is recognized." "The higher the organization of an animal, the more complicated do its instinct motivations and their combinations become. This has two effects: First, more potential experience is included in the images or image functions; and, therefore, the environment will offer more stimuli capable of activating the motivations. Second, the greater the complication of this system, the more impossible is it for any environment to duplicate all the images, that is, to satisfy the motivations in actuality. There thus arise in a creature so highly organized as man, programmes of activity that are forever progressive, and these are interests." In a word, for the development of interest we need a stimulation of primitive biological patterns, an inability to satisfy the needs of these patterns, and a capacity for developing, by a process of combination, more and more imaginal patterns. This is in harmony with modern psychopathological view, especially that of psychoanalysis. The author urges the reader to note that interests in this sense are not in their essence rational, but, rather, constitute an urge never completely satisfied, the sources of which reach deep into the instinctive life. In well disciplined individuals, fantasies, as hypotheses, lead to rational ends, so useful and practical that they tend to obscure the essentially irrational nature of the *vis a tergo*.

The initial stage in our behavior, relating to an object, is a physical response or orientation, including, in introspective terms, a state of expectation with reference to it. This reaction is spoken of as attention. This orientation may occur automatically, be forced upon us, or be wilfully produced. Automatic and forced or coerced orientation make up what is commonly spoken of as involuntary attention. In automatic attention, it would appear at first sight that the individual is quiet neutral or passive. This is readily shown not to be the case. A person walking to a destination avoids others when he meets them and goes directly to his destination. If he were really neutral, as he is when absent-minded, he would be apt to bump into others and to get lost. Patterns of an orientation type must, therefore, be operative. In general, it can be said "that in automatic attention there is an activation of patterns so habitual

as to perform their function at the fringes of consciousness, and so adequate in their operation as not to need the kind of modification which is accomplished by full consciousness." The development of automatic from voluntary attention is seen when we are learning a game.

When attention is coerced by a sudden, unexpected stimulus, no comment is necessary. In ordinary distractability, which, though coercive, is essentially normal, an orientation, already set for a response, is broken into and a new orientation is assumed. Attention thus is distracted. At least two factors are at work in this. There may be a diminution by fatigue or otherwise of the physiological factors in the orientation response, frequently spoken of as the element of conation. Again, it would appear that, along with this and cooperating with it, is an activation, by apparently trivial stimuli, of patterns or trends, important in the emotional life of the individual, with the result that the orientation is switched involuntarily from one object to another one. In abnormal compulsive thinking, in which the individual seems compelled to orient himself with reference to some object or activity, so that he is more or less constantly plagued by its insistency, another type of involuntary attention is exemplified. Yet, this differs in some respects only in degree from distractability. It is now almost universally agreed that in compulsive thinking there is an activation of patterns whose claim for fulfillment, though outside the awareness of the individual, is prepotent and only satisfied by some compromise. The personality self-preservative instincts prevent the pattern as a whole from coming into consciousness, and, as if by a compromise, the potency of the pattern partially spends itself on the compulsive thought or activity which does appear in consciousness. Owing to the fact that the dynamic patterns or complexes are outside of consciousness, they cannot be voluntarily brought into consciousness except by a special and roundabout technique.

The functions of consciousness and volition in voluntary attention are commonly misapprehended. Volition does not determine the extent of what is to be perceived. In fact, we perceive chiefly what we have in the past learned to perceive. Consciousness activates, or, more correctly, partially or subliminally activates, a pat-

tern toward which the individual then orients himself, as he does in coerced attention. The next step in the behavior is that of an appropriate response, which is spoken of as perception. Attention, therefore, is preliminary to perception and is distinguished from it artificially for purposes of description.

The author discusses perception from two points of view. The process of perception may be inferred from objectively observed behavior. On the other hand, in the human organisms at least, when perception takes place, there is, to introspection, a subjective experience parallel with it. An animal subjected to a stimulus, such as food at a distance, reacts by going to the food and then by engaging in the acts involved in eating it. The reactions involved are appropriate, so that from the objectively observed facts it is fair to infer that a unified process has occurred, which might receive some characterization such as perception. "If we were not introspective, we should think only of reactions and probably never speak of perceptions at all." In the author's terms, the food activates in the animal a reaction pattern or constellation of reaction patterns. These patterns have to do, not only with the food as such, but also with the location of the food in space at a distance. Without this latter component, which consists of patterns activated by the surrounding objects forming a sort of background, the animal might well react by engaging in movements as if it were eating when the food is still at a distance. Perception, then, is a process which has to do with the central object and, in addition, with the surroundings of the object which activate patterns resulting possibly in an approach to the object.

When perception is introspected, there is an awareness of the images belonging to the object and its background, which images are externalized and which correspond closely with the external reality. The external reference is accomplished by means of signs such as that the image cuts off appreciation of what is immediately behind and covered by the image, which sign a purely subjective image does not have. The correspondence with reality is necessarily approximate, for we perceive only what past experience has provided us with the patterns for. The image specific for the object attains this approximation by what the author calls a "reference

back" of the image corresponding to the pattern evoked to the object with its attendant background. By this process of "reference back" to the external object and its attendant background images the primary image is compared so that in the final perception there is as close correspondence as past experience permits. Amorphous ink blots on a plain background present little of the attendant background in the sense indicated. As a result, the "reference back" process is curtailed and the primary imaginal processes press forward relatively uninfluenced, with the consequence that, in laboratory experiments with such ink blots, the subjects of the experiment relate in their descriptions of the blots quite fanciful details. "False perceptions (illusions) illustrate the mechanism of true perceptions when they are closely examined. It is then seen that the falsity of the perceptions rest on a relative dominance of an internal flux over the images aroused by the environment. This may be the product of a relative strength of the internal processes which intrude themselves on consciousness (the psychopathic type), or of a weakness of the environmental control due to the external stimulus not being in the focus of awareness." The author quotes Taine: "The external perception is an internal dream which proves to be in harmony with external things; and, instead of calling hallucination a false external perception, we must call external perception a true hallucination."

In a chapter following that on perception, the author seeks to discuss the actual significance of the percept for the individual. In its narrowest sense, the significance of a perception clings to the central and relatively unchanging component of the perception as it is apprehended at different times and under different circumstances. But this, in actual experience, is only one of several possibilities. A given perception may gain its chief significance from its attendant circumstances which form the background, as, for instance, a lighted match in a powder magazine; or from the fact that the perception has, in the past experience of the individual, had an especial association of importance, as, for example, a keepsake. This larger and more genuine relationship the author indicates by the term "meaning". The reaction of an individual may, therefore, be determined by the central generic component in a per-

ception, by the environmental setting of the perception, or by the fact that the perception activates patterns leading to reactions peculiar to the individual. The author gives as an example of the latter the word "lobster", which, in the case of a depressed person, had the meaning that he was going to be boiled alive—a meaning obviously contributed by the individual's depressed emotional state. Effective treatment of neurotic conditions not infrequently depends upon bringing about a change in such "meanings" as may be contributed owing to unfortunate experience. In psychopathic individuals, there may be two meanings: a conscious and an unconscious one, due to different associations, conscious and unconscious, to the same stimulus.

Having had a perception and experienced its meaning, what is to be said of those "mental events that have to do with the asking and answering of the question, Where have I had this experience before? In other words, if memory as we know it introspectively is, for purposes of discussion, divided into recognition and voluntary recall, how are we to discuss the recognition component? In general, the author is appealed to by the conclusions of Katzaroff, namely, "that in recognition there is first an affective reaction, a feeling of familiarity attached to the object of perception, which is immediate and direct; this is followed by an activation of images and memories, more or less specific, which justify or moderate the original feeling of familiarity. The affect is the essential kernel, the memory of the antecedent experience a rationalization. He (Katzaroff) thinks that the confusion in various accounts of recognition, given by different psychologists, is due to the stress on, or exclusive study of, the second element by practically all authors." Anyone within his own experience may confirm the isolated presence of this affective element when, for instance, he sees a face which is tantalizingly familiar, but, which, nevertheless, he does not recognize. This phenomenon is ordinarily indicated by the term, "*déjà vu*". Again, familiarity, even when unopposed, does not necessarily lead to recognition, but may remain spontaneously at the level of the habitual, as, for instance, when one meets a member of the family at home. The urge to recognition appears when the familiar object is seen under strange circumstances. Only then arises the challenge—"Where have I seen this before?"

The nature of the affect giving rise to this feeling of familiarity is reduced to a feeling of "me-ness" associated with the perception or idea. Recurrence of a perception without this is not recognized, i. e., no question arises as to its having been perceived before; it is taken naively as a new experience. This is displayed in the performance of post-hypnotic suggested acts such as a suggested unusual name for the figure 5. Again, this is seen in patients suffering from Korsakoff's psychosis. In these latter instances, patients are unable to recognize a person, a name, or date, for instance, which has just, shortly before, been presented to them. Often, if such patients yield to force, they ingenuously give the name or date correctly, but it arouses no feeling of familiarity and is explained as just coming to mind. There is an absence of a feeling of "me-ness" or "mine" about the object perceived again. The feeling of "me-ness" has its origin upon the careful examination of the object when it is perceived first. A feeling is then engendered which stamps it as "mine"; that is, there is established a definite association with the personality. Acts performed or objects perceived in a state of absent-mindedness also have no such personality association and, hence, are not recognized as having been done or perceived before. In ordinary normal recognition, the process runs off smoothly and rapidly so that the affective components are not noticed. It is when the process does not run off smoothly that there is an opportunity to study the underlying factors. The feeling of familiarity is seen to be due to the revivification of a feeling similar to that of the present stimulus and, normally, along with it, there is an activation of patterns which constitute the memory of the stimulus. When this memory does not make its way into consciousness, but is held up, only this affect appears in awareness and it persists with increasing discomfort until the inhibition is removed, or the entire topic is supplanted. Study of this phenomenon shows that the intensity of the affect "corresponds to a dominance of co-consciously operating interest." This thwarted feeling of familiarity does not occur in connection with objects or interests of an indifferent nature, but only when there are aroused associations instinctively important for the individual.

The feeling of familiarity, so important in recognition, is only a

preliminary of the entire recognition process. When not inhibited, the processes aroused come into consciousness and there then follows a judgment, the result of comparison between the immediate perception and the memory. This may be a judgment affirming identity, similarity or dissimilarity. It is noteworthy that often the dominance of the personal interest may overcome the conscious judgment and give rise to an illusion, as is so frequently seen in the misidentifications displayed by manic patients.

Voluntary recall of past experience, as contrasted with automatic recall displayed in reverie and in free association, depends upon a previous conditioning of orienting circumstances with that which is to be recalled and upon the association of that to be recalled with the personality. These attendant orienting circumstances give meaning, in the author's sense, to the object. Meanings, if held steadily in consciousness, tend to break up into their constituent patterns or pattern constellations. Hence, if one asks himself what he had for breakfast, he gives voluntary attention to the pattern breakfast which soon activates constituent patterns, one after another, until the details of the breakfast are set forth. "Consciousness holds a given stimulus in awareness and this causes an activation of the reactions previously conditioned with it; as these in turn appear in awareness, consciousness criticizes them, rejecting the irrelevant and branding the relevant as valid memory."

A judgment of validity depends for its warrant upon the richness of its associations. In an extreme case, for instance the pathological liar, the innumerable invented details eventually lead him to believe his own fabrications. In disorders in which there is a rich phantasy construction the same judgment of validity is seen. Well within the normal experience, circumstances somewhat related may combine in such a way as to create a false memory. The fact that words are conditioned with objects and meanings brings about a type of pattern, a verbal pattern, which greatly facilitates the handling of past experience. Certain patterns, such as historical dates, familiar names, etc., secure an habitual validity. Such judgments, owing to their unfailing usefulness, carry with them no question of doubt, though, in fact, we learn by experience that this feeling of rightness, where the accuracy of memory is of especial moment, should often be confirmed.

The foregoing is a summary digest of the half of the book devoted to psychological patterns. The second half of the book, treating of physiological patterns, will not be dealt with at length. In part this is because the readers of *THE PSYCHIATRIC QUARTERLY* will undoubtedly be chiefly interested in the treatment of psychological patterns, and in part because anything like an adequate summary of the second half of the book would require more space and more critical study than the writer is prepared to devote to it. The following brief summary, or indication of the content, of the part on physiological patterns does not follow the order as the author develops his exposition, but it is hoped it does not do violence to it.

Living matter differs from non-living matter by the fact that in the living substance a given reaction continues, the substance itself recreating the conditions necessary for the continuance of the reaction. In dead matter a reaction continues until there is an exhaustion of some factor. Living matter "is not like a furnace with so much coal in it that will burn until it is exhausted, but rather like a furnace plus a stoker who keeps putting coal in." The capacity of protoplasm to maintain itself relatively unchanged in a changing environment differentiates it from syntheses of chemical substances. No such association of chemical substances achieves this self-maintaining capacity. "When life begins some factor that defies physico-chemical analysis has appeared. This factor is then, by definition, an immaterial one, for matter is what behaves wholly in confirmation with physico-chemical laws. The presence of this immaterial factor is evidence of a pattern, or patterns, being already present in the simplest protoplasm observed or conceived. The origin of this first integrating principle, i. e., the origin of life, is not our quest, which is, rather, its subsequent development."

The author supports the thesis that repair reactions, which are primitive, inherent patterns, tend more than to make losses good. This over-repair leads to growth. The used muscle grows. "Similarly in bone, repeated pressure or tension leads to deposition of mineral salts just at those points where the force is applied, where protoplasm is destroyed in its function of passive resistance, and where inert solids are therefore laid down. Hence the apparently marvelous architecture of bones, which is merely the inevitable

expression in form of the great central mystery of the repair process which 'makes things make themselves' and which is, as we have seen, integral to life itself as a phenomenon of maintaining individuality in a changing environment."

Patterns arise as a consequence of reactions carried out at the same time or consecutively. The pattern appears with repetition of the constituent reactions. Physico-chemical processes are essential to the formation of a pattern, but the pattern, once formed, guides the physico-chemical processes. When repair reactions follow specific reaction, the author indicates that, after countless generations, the repair follows immediately on the stimulus, the specific function for the stimulus becoming gradually an image function and so elided. Then the stimulus leads over directly to repair, and repair which is not compensatory for loss in growth. "In the course of embryological development, a stimulus appropriate for a given function seems to call forth the structure which will perform this function, then we have a growth pattern in which the function in question has become an image function." In this way arise growth patterns. In the matter of heredity the author states that the genes formula of the biologist corresponds in fact to his own conception of pattern.

Dealing with the development of the nervous system, the author attempts consistently to apply his hypothesis, by which it is assumed that structure follows function. The end result is that there arises a specialized system which facilitates the reception and conduction of stimuli. The author seeks also to show that the central nervous system does not act simply as a machine, conducting sensory stimuli inward and transferring them into efferent impulses, "but, rather, that special disturbances are set up within the central nervous system which issue as motor phenomena," which he regards as the basic function of the central nervous system. He points out qualities of the nervous system as illustrated by the phenomena of vicarious function, which would be impossible in a machine.

The author finds numerous examples of liminal images and image functions in the nervous system. For instance, in a spinal animal, having determined the intensity of stimulus which will just cause a

flexion response in the hind limb, it is observed that this response may be elicited with a stimulus below this intensity, if the crossed forefoot is stimulated at the same time. The reflexes of the hind foot and cross forefoot have been conditioned together. Hence, stimulation of one, after the conception of liminal images, lowers the intensity of the stimulus necessary for the response of the other.

Examples of complete image functions in the nervous system the author illustrates by the phenomena brought about by rotating the head. The labyrinth is stimulated, which gives the sense of rotation, and at the same time the eyes present a nystagmus which is a series of jerks of the eye conditioned with the apparent rapid movement of objects in the field of vision. A sense of dizziness follows. If now one ear is syringed with hot and the other with cold water, labyrinth stimuli are set up, the subject feels dizzy, and at the same time nystagmus is observed. "In other words, past experience is here being reproduced purely by association; reflex movements that I would ascribe to image function stimulation are produced."

The author examines as examples of the most promising mechanistic theories of selective nervous activity the synapse theory and the theory of conduction by decrement. The synapse theory he finds quite inadequate and inconsistent. The theory of conduction by decrement he finds more adequate. Blocking and opening of pathways by processes at the synapses do not allow escape from a rigidly mechanical system of unvarying response. The hypothesis of selective conduction by utilization of decremental regions is more to the point. The hypothesis utilizes the fact that at any given point along a nerve past which an impulse has just been transmitted the nerve is, at this point, for a short period, unable to transmit another impulse. This is the "refractory period". Following this, there is another short period of hyper-excitability. It seems probable that the nerve impulse is a wave of polarization caused by the passage of ions through a semi-permeable membrane that insulates two fluids of different ionic concentration. Utilizing this refractory period as a means of interrupting the nervous impulse, and by avoiding it as a means of facilitating a nervous impulse, the theory of conduction by decrement is built up. First suggested by Adrian and Lucas, it has been extended and refined by Forbes. The

author, however, still finds it mechanical and incapable of meeting the critical test of explaining vicarious function and, also, the increasing perfection of response with practice.

Mechanistic theories appear, therefore, to the author to be inadequate. Yet, it is obvious that a specific pathway in, and a specific pathway out of, the central nervous system, are essential to coordinated function. In so far function is specifically dependent upon structure. Within the central nervous system, the incoming stimulus is somehow rearranged so that there issues an appropriate impulse over a specific efferent pathway. Within the central nervous system, where the intercommunication possibilities are so wide, the dependence of coordinated action upon specific intercommunicating pathways is less rigid. Mechanistic factors cannot be neglected, yet they apparently do not suffice. We have to meet the problem of vicarious function, of improvement by practice, and, in general, flexibility of function. The problem is to discern what the complementary factors are which supply the deficit existing in a purely mechanistic system. The central nervous system cannot work like a telephone exchange. The author comments on the complication and multiplicity of the connector elements in the central nervous system. "In this complication something must appear that is non-mechanical in its mode of functioning. If we have a system whose function is dependent upon relationship of parts, *qua* relationship, rather than on the sum total of the functions of the parts, then we have a system that is non-mechanical and satisfies the conditions. Relationships are things that are understood psychologically, they are abstractions, patterns. For their representation material units are necessary, but no one given set of units. For instance, the relationship of three points makes a triangle, but any three points will do (provided they are not in the same straight line)." The hypothesis the author advances "is that the functions of the central nervous system are to be understood as the product of relationships of points of excitation rather than of the excitation of specific points." The perception "rose" is made up of impressions of color, shape, of smell, the auditory and motor elements attaching to the word "rose". The percept "rose" is not localized in any one place. Many centers are involved in its formation.

There is no one nervous component of the percept which is unique to the percept "rose". What is unique is the grouping of the components. For the excitation of the percept what is necessary "is the establishment of sufficient, localized excitations to form the proportions, relations, or pattern 'rose'. The anatomical representation we will call 'design' rather than pattern, in order to avoid confusion." Specificity of perception depends, in the author's understanding, on the relationship of the anatomical units stimulated and that "so long as the relationship is expressed there need be no specificity of the particular units involved in establishing the relationship." If many elements enter into the design some may be eliminated without disturbing the design as a whole. For instance, one without vision may recognize a rose by means of stimulation of other senses. Vicarious function is, therefore, explainable. On the motor side "the effective stimulus for a specific muscular movement of a reflex order is, therefore, the excitement of a number of neurones in a specific relationship. The design is determined by the immaterial pattern I have been discussing all along. How this is done I do not know, for it is the fundamental mystery."

The author has indicated that patterns are made of image functions and liminal images. Corresponding to a liminal image would be an incomplete design; to an image function, a completed design. Graphically represented, four dots representing a square, make up an image function of a square, it is, also, a liminal image of an octagon. The anatomical design corresponding to the image function of an octagon would be represented by four additional dots placed equidistant from the dots of the square and the same radial distance from the center of the square. In the same way, the octagon might be regarded as a liminal image of a circle of the same radius. In the octagon or circle the square has been integrated and lost its individuality in the more complicated pattern.

In connection with this theory of anatomical designs, the author emphasizes the constant inflow of impulses into the central nervous system, which arise from visceral and postural sources, as well as from the skin and special senses. This inflow keeps the central nervous system in a state of sub-liminal activity, or in a state of vigilance, somewhat analogous to muscular tone. This vigilance is

indicated, not only by the effects of narcosis, but by the reaction of decerebrate animals in which, for instance, at a sudden sound the activity of the reflexes is greatly increased; the noise augments an already existent activity. The presence of a subliminal central nervous activity is also displayed in spinal shock. The author finds explanations of spinal shock in the deprivation of the cord cells of the impulses which come, in a large measure, from especially the medulla and midbrain. "When a large number of cells are isolated from the spinal cord that has previously been receiving the bulk of its activating impulses from them, the remainder have not a sufficient number of autochthonous stimuli to keep the local machine running." Recovery from spinal shock, the author conceives, consists in a new equilibrium in which such impulses as arise from the skin and segmental sensory apparatus eventually suffice to reawaken segmental reflexes and to extend their activity until the behavior of the spinal animal is finally established. The author remarks that a condition analogous to spinal shock occurs during sleep when the threshold for spinal reflexes is heightened by the withdrawal of postural and other impulses from the cephalic end of the nervous system. "The spinal animal is a new creature: the primitive patterns which can operate through the surviving structures, and so establish the reaction type known as the 'spinal animal', once existed independently (phylogenetically). But this was in an animal that had not yet developed the specialized structures, which the modern mutilated animal has. The very essence of pathological reactions is here exemplified: Primitive patterns control specialized structures which ought to be controlled by specialized, i. e., more complicated and more highly integrated, patterns."

The chapter on inhibition, in which the author seeks to interpret the facts in terms of the design and pattern hypothesis, is one of the most instructive of the book, as well, perhaps, as the most difficult to grasp. The author considers inhibition of one reflex by another, the inhibition by higher centers of reactions of a reflex type (as, for instance, the absence of the Babinski reflex in the intact nervous system) and that inhibition which results in the domination of a discriminating over a non-discriminating reaction. The author, in his discussion, repeatedly refers to the crossed extension reflex of

the spinal animal. By this he refers to the fact that flexion of the hind leg of a spinal dog will cause extension of the opposite hind leg. This illustrates a thoroughly integrated pattern reaction such as is most important for walking. If, when one hind leg is stimulated for flexion and the opposite hind leg which is extended is also stimulated for flexion, it is difficult or impossible to get the latter response. This difficulty, or apparent inhibition, the author explains as follows: A physiological design can be a design only when there is a contrast in the degree of excitation of the neurones of the design, as compared with that of other background neurones. When a pattern is excited, it is quite as important that this contrast exist as that excitation itself exist. In no other way may a pattern come into existence. The relative inactivity of the opposed muscles is thus accounted for. The reason for the difficulty of stimulation of the opposed muscles is not that the corresponding neurones are inexcitable, "but that any stimulus penetrating to this particular part of the nervous network is not distributed by patient" and is relatively quiescent so far as any activation of design is concerned.

When, as in learning new movements required by unfamiliar games, the discriminative movement supersedes the simpler one, the author states that it is probably wrong to say that the higher centers exhibit an inhibitory action. Rather, he claims, the simpler, more primitive reflexes are incorporated into the larger alternative patterns. Conversely, when the more highly integrated pattern is interfered with, as in paralysis, the component, simpler and more primitive pattern is disengaged. The Babinski phenomenon is an example. There is not strictly a release of inhibition in the ordinary sense. Rather, there are two alternative patterns—one of which may be incorporated in the other. The obliteration of the larger unity by a break in the nervous intercommunications sets free the simpler pattern incorporated in the larger one now interfered with.

New patterns are relatively unstable as compared with older patterns. This instability brings it about that sometimes the new pattern may fail to work and the primitive, more wholesale ones may appear. Here again the author looks upon discriminative and the non-discriminative as alternative patterns. The conditions under

which such alternative patterns operate the author discusses at some length. In some cases, other things being equal, the reaction which spatially has the advantage will probably come first into action. For instance, if one design is cortical and the other sub-cortical, the distance may be in favor of the latter. Yet, as in boxing, the more discriminative cortical design may become so well integrated as to give it dominance over the more primitive, defensive reactions. Again, "conscious reactions are more recently acquired than instinctive ones, the latter, therefore, tend to predominate when the stimulus is sudden or when the subject is fatigued." One may ask why the more recent, conscious reactions are ever the reactions of choice over the more instinctive ones. The author replies that "when consciousness is operating, liminal images are present for all the patterns relevant to the stimulus towards which the organism may be oriented. Discriminative response then occurs not in virtue of the superior integration of the discriminative pattern, but because the pattern is already potentially active" because of the attention to it. Physiologically, inhibition is "reduced to the partial and preliminary activity of the dominating pattern in the form of liminal images." Psychologically, repression may be reduced to the same scheme. "Whether a given reaction pattern will be integrated with consciousness or not, depends, then, on the presence of liminal images suitable for absorption of the pattern, or incompatible therewith. If the latter, no integration of consciousness with the pattern ensues; in other words, it is repressed." Inhibited reactions at the physiological level are lost, because they are not guided by patterns. It requires many repetitions to integrate a pattern at the physiological level. At the mental level, patterns may be integrated on a single coincidence and such a pattern may be repressed and exist until it is brought into consciousness on the principle that what quiets disturbance in the central nervous system is discharge.

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The reviewer has ventured to offer such a lengthy review in the interest of at least an approach to an understanding of what seems to be an important contribution. An ordinary review of the book would necessarily prove inadequate to convey an impression of the

real character of it. The book itself is very condensed and perhaps it is not unfair to say that the text is at times unclear, or at least difficult to understand. Nevertheless, anyone interested in a discriminating discussion of fundamental principles will find a painstaking study of the book instructive, even though he may not follow the author in full agreement.

AGE OF FIRST ADMISSIONS WITH ENCEPHALITIS LETHARGICA

BY BENJAMIN MALZBERG,
ASSISTANT DIRECTOR, STATISTICAL BUREAU, NEW YORK STATE DEPARTMENT
OF MENTAL HYGIENE

In cases of mental disease age is recognized as an important factor in the clinical picture. An illustration is seen in the term "dementia præcox". Some of the correct relations of age to this disorder were not perceived until sufficient data had been accumulated to permit an accurate classification of patients by age at onset. Similarly it may be of interest to consider encephalitis lethargica, which has come into prominence within the past decade. Accordingly an analysis is made of the age distribution of mental patients suffering from such disease. It is known in a general way that encephalitis lethargica is responsible for the admission to State hospitals of many of the patients aged 15 years and under. But the entire age distribution of cases of this disease has never, so far as is known, been submitted to a thorough analysis. To obtain a complete picture it will be necessary to consider three factors, the central age about which the entire group appears to be concentrated, the degree of symmetry in the distribution about the typical age, and the degree of variation within the group.

There are comparatively few hospital admissions diagnosed as encephalitis lethargica in any one year. In order to secure groups of each sex adequate for statistical purposes, it was therefore necessary to bring together the admissions for several years. All patients received in the New York civil State hospitals as first admissions, and diagnosed as cases of encephalitis lethargica during the 9 years 1920-1928 inclusive, were selected for study. They provided a group of 427, of whom 251 were males and 176 females. Their age distributions are shown in Table 1 and illustrated graphically in Chart 1.

For the entire group we find an average age of 24.2 years on admission. The females average 24.8 years, and the males 23.8 years. The difference of a year, however, is not statistically significant and we must conclude that with respect to this sample,

TABLE 1. FIRST ADMISSIONS WITH ENCEPHALITIS LETHARGICA TO THE NEW YORK CIVIL STATE HOSPITALS, 1920-1928 INCLUSIVE, CLASSIFIED ACCORDING TO AGE AND SEX

Age in years	Male		Female		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
5-9	29	11.5	9	5.1	38	8.9
10-14	42	16.7	29	16.5	71	16.6
15-19	51	20.3	40	22.7	91	21.3
20-24	32	12.7	28	15.9	60	14.1
25-29	27	10.8	21	11.9	48	11.3
30-34	18	7.2	12	6.8	30	7.0
35-39	17	6.8	13	7.4	30	7.0
40-44	19	7.6	11	6.3	30	7.0
45-49	5	2.0	6	3.4	11	2.6
50-54	6	2.4	3	1.7	9	2.1
55-59	4	1.6	3	1.7	7	1.6
60-64	1	0.4	1	0.6	2	0.5
Total	251	100.0	176	100.0	427	100.0
Average (years)	23.79 \pm 0.541		24.77 \pm 0.615		24.20 \pm 0.407	
Standard deviation (yrs.)	12.70 \pm 0.382		12.11 \pm 0.435		12.47 \pm 0.288	

males and females have practically the same average age at admission. These results should be compared with those for all first admissions to the New York civil State hospitals. For this purpose we used the first admissions for the 12 months ending June 30, 1927. These are shown in Table 2 and Chart I.

The average age of the entire group at admission is 45.7 years; the males and females average 45.1 years and 46.2 years respectively. Each of these greatly exceeds the corresponding age in the group of encephalitis lethargica, the differences being so great as to be obviously significant from a statistical point of view. It should be further noted that the female first admissions are 1.2 years older than the male first admissions. Upon applying the proper statistical tests, we find that this difference is probably significant, and we must, therefore, conclude that female first admissions tend to be slightly older than male first admissions.

Turning to the second aspect of the problem we find equally clear cut differences with respect to symmetry. These are shown very distinctly in Chart I. The curves for total first admissions distribute

TABLE 2. FIRST ADMISSIONS TO NEW YORK CIVIL STATE HOSPITALS, YEAR ENDED JUNE 30, 1927, CLASSIFIED ACCORDING TO AGE AND SEX

Age in years	Male		Female		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Under 15	27	0.6	24	0.7	51	0.6
15-19	209	4.8	135	3.8	344	4.4
20-24	358	8.2	287	8.1	645	8.2
25-29	412	9.4	318	8.9	730	9.2
30-34	429	9.9	381	10.7	810	10.3
35-39	470	10.8	351	9.9	821	10.4
40-44	491	11.3	335	9.4	826	10.5
45-49	394	9.1	354	10.0	748	9.4
50-54	327	7.5	293	8.2	620	7.8
55-59	274	6.3	234	6.6	508	6.4
60-64	285	6.6	223	6.3	508	6.4
65-69	225	5.2	186	5.2	411	5.2
70 and over	449	10.3	433	12.2	882	11.2
Total	4,350	100.0	3,554	100.0	7,904	100.0
Average (years)	45.14 \pm 0.183		46.27 \pm 0.207		45.65 \pm 0.138	
Standard deviation (yrs.)	17.98 \pm 0.130		18.33 \pm 0.147		18.14 \pm 0.097	

themselves about the means with but slight tendencies to skewness, so that they suggest the bell shaped or "normal" curve. This is the well-known result obtained so often with anthropometric characters. In encephalitis lethargica, however, the curves are decidedly asymmetric, the peak of the curves coming well toward the younger ages.

The tendency towards asymmetry of distribution and the heaping up of cases of encephalitis in the younger groups may be shown in a different manner. The age distribution in encephalitis lethargica is included between the limits of 5 and 65 years, a span of 60 years. In distributions that are fairly "normal", half the cases should be comprised within half the total span, or 30 years. Adding up the cases to the 30th year, as shown in Table 1, we find 72 per cent of both males and females instead of 50 per cent within the prescribed limits. In the case of total first admissions, we may consider the limits as extending from 10 to 90 years, a span of 80 years. Half of this span or 40 years includes 43.7 per cent of the

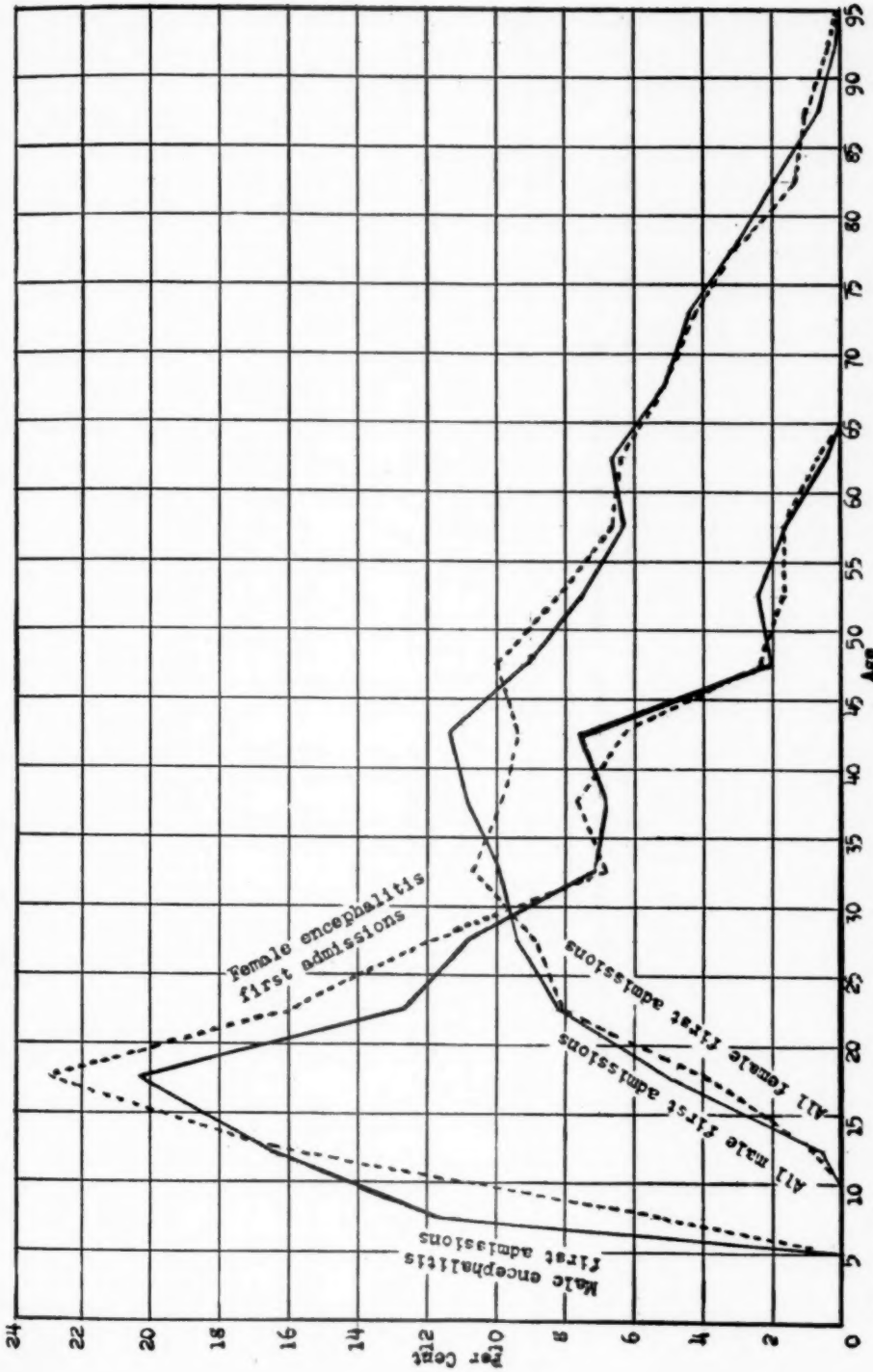


Chart 1. Per Cent Age Distribution of Encephalitis Lethargica First Admissions Compared With That of All First Admissions, New York Civil State Hospitals

TABLE 3. FIRST ADMISSIONS WITH ENCEPHALITIS LETHARGICA AND TOTAL FIRST ADMISSIONS TO NEW YORK CIVIL STATE HOSPITALS, CLASSIFIED ACCORDING TO SEX, SHOWING AVERAGE AGE AT ADMISSION, STANDARD DEVIATIONS, AND COEFFICIENTS OF VARIATION

	Male		Female		Total	
	Encephalitis lethargica	Total first admissions	Encephalitis lethargica	Total first admissions	Encephalitis lethargica	Total first admissions
Average age (years)	23.79 \pm 0.541	45.14 \pm 0.183	24.77 \pm 0.615	46.27 \pm 0.207	24.20 \pm 0.407	45.65 \pm 0.139
Standard deviation (years)	12.70 \pm 0.382	17.98 \pm 0.130	12.11 \pm 0.435	18.33 \pm 0.147	12.47 \pm 0.288	18.14 \pm 0.097
Coefficient of variation	53.39 \pm 2.013	39.82 \pm 0.330	48.86 \pm 2.136	39.62 \pm 0.363	51.53 \pm 1.471	39.75 \pm 0.245

males and 42.1 per cent of the females. These are relatively but slight deviations from the expected 50 per cent. Why there should be such a significant correlation between encephalitis and the younger ages is not known.

The facts with respect to variation are summarized in Table 3. The row headed "standard deviation" suggests at first sight that the groups of encephalitis lethargica are less variable than all psychotics because their deviations from the means are smaller. But it should be evident that variability is necessarily relative and that to make the deviations comparable, they should be measured in similar units. This is shown in the row headed "coefficient of variation". We now find that both sexes in the group of encephalitis lethargica are decidedly more variable than the corresponding groups among total first admissions.

In view of these decisive differences with respect to the three important characters of the mean, symmetry and variation, we must conclude that there is a selective action with respect to age by encephalitis lethargica.

BOOK REVIEWS

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Treatment, Medicine, Surgery and Other Topics of Interest to Students and Practitioners. Vol. 1, 38th Series, 1928. Edited by Henry W. Cattell, A. M., M. D. Published by J. B. Lippincott Company, Philadelphia and London.

The first article on "Visceroptosis", by Dr. John Phillips, Cleveland, Ohio, is well illustrated by photographs of typical cases followed by schematic drawings of corrective exercises, then by others showing the results after treatment. The author describes the characteristic habitus and body configuration which should lead the discerning physician to begin preventive treatment in childhood. After the visceral prolapse has occurred, his second type of treatment, corrective, must be employed. The illustrations used bring out his main ideas very well.

Dr. J. H. Garberson has written a concise article on "Tularemia", an infectious disease of rabbits which is frequently transmitted to man. It is up to the minute but seems to have been taken principally from work done by Dr. Edward Francis. Much more will be published in the future concerning this disease as it becomes more prevalent in man. Departments of health will require stringent laws to prevent its spread. At present we find it most common among those men who dress rabbits for the markets.

Dr. James Strandberg of Sweden, has reviewed the modern view "On the Change in the Modern Picture of Syphilis as a Result of Augmentation of Vascular and Nervous Symptoms and the Cause Thereof".

He says the prognosis of syphilitic infections has always created and is still creating interest—despite discoveries our knowledge is still imperfect. Involvement of the vessels and nerves has come to the foreground and syphilis has lost its character as a skin disease. Authorities seem to differ as to the effect of treatments; certain it is that the disease has changed in violence since the time of Columbus, and it may well happen that treatment has had its effect, but what about changes in the virus of the disease? Do we encounter a neurotropic spirochaete?

The author draws attention to another factor, that of age. In the middle of the eighteenth century, for example, the average duration of life was only 35; it has gradually increased and is now approaching 58 years. As it

is only in the later years that a great number of the sequelae become apparent, naturally, the higher the average age, the more sequelae will be found.

Further along he states that metasyphilis is rare, whereas syphilis of skin, mucous membrane and bone is common. Syphilis with manifold manifestations is gradually being transformed into a more insidious form under the influence of civilization. Again he says, the interval between the infection and the onset of the nervous symptoms is shorter in the treated cases than in the untreated. These intervals are stated by Lauters to be: In tabes—for untreated cases 16.1 years, for treated cases 13.3 years; in paralysis—for untreated cases 16.8 years, for treated cases 13.8 years. In vascular syphilis, too, similar conditions seem to prevail, as in thoroughly treated cases of aortitis symptoms arose about eight years earlier than in untreated cases.

“Clinical experience has taught us for ages that the prognosis in exanthematous infectious diseases, e. g., morbilli and scarlatina, is worse if the rash is slight or even entirely absent. The old syphilologists, in explaining that specific treatment should not be adopted until the disease had come out in full bloom, were clearly, if unknowingly, on the same track, and modern venerologists have now taken up the immunizing capacity of the skin for discussion in connection with the syphilitic problem. The treatment of early syphilis prevents the formation of antibodies. Auerbach suggests that in patients who, as a result of treatment administered or from other reasons, show no, or only slight, changes in the skin, the formation of antibodies should be stimulated by efficient irritation of the skin. Oelze, Huber and others, in addition to specific treatment give their patients an “esophylactic” course of inunction with irritating ointments, containing soft soap, silicious earth, turpentine, etc.

Under the section on traumatic surgery Dr. George G. Davis, Chicago, has contributed an excellent article on “A Ball Splint for Hand Fractures” profusely illustrated by skiagraphs, which is really an outgrowth from the old treatment of dressing fractured metacarpals over a roller bandage. It is apparently a simple and very satisfactory method that would lend itself to use in State hospitals.

Dr. Lewellys F. Barker, Dr. John B. Deaver and others are among the contributors to this volume.

Vol. 3, 37th series, 1927, contains an article by Dr. Theobald Smith, director of the Department of Animal Pathology of the Rockefeller Institute for Medical Research, Princeton, N. J., on “The Passing of Disease from One Generation to Another and the Processes Tending to Counteract It”. In summing up he says “We have seen that while the natural defenses set up through evolutionary and selective processes are not very effective, they

undoubtedly tend to save life in its earliest stages. Our observations, furthermore, intimate that when natural processes are interfered with much may transpire in the earliest days which acts either precipitously to destroy life or else to produce open disease later on in the earliest months. To what extent the events transpiring in the early days of human life are responsible for the high mortality of the first year is a problem for human medicine to solve. Perhaps our experimental results may add some information to the mass of knowledge already brought together on this subject".

Dr. Nonne, professor of neurology, University of Hamburg writes interestingly on the subject of "Anemic Spinal Disease", of which comparatively little is known.

Lichtheim in 1889 described disseminated foci of degeneration in the spinal cord, involving chiefly the posterior tracts but also the lateral and anterior tracts. All had severe anemias, which led to death. It is generally agreed today that the disease is not due to the anemia but the toxin which produces both the anemia and spinal disease is not known.

"As a rule the disease starts with paraesthesias which are very obstinate and often very boresome and which are localized at the lower, but also at the upper extremities. The degenerations are of a purely parenchymatous type, there is swelling and thickening of the axis cylinder which finally disintegrates, without inflammatory reactions in the vascular system.

Since they involve the posterior cord we have ataxia of the lower extremities and a loss of tendon reflexes. The lateral and anterior tract disorder produces paretic weakness with increase of the tendon reflexes. Sensory troubles are often absent or in a slight degree only. Sphincters are under control and light reaction of the pupils normal. Some cases show only paraesthesias with areflexia or hyper-reflexia of the lower extremities. If lateral tract degeneration predominates we have spastic reflexes and paretic weakness. Frequently the progression of the disease can be demonstrated by the fact that spastic reflexes disappear and are replaced by areflexia or vice versa".

Following this paper in the section on diagnosis and treatment we find under neurology one by Dr. E. D. Friedman on "Pallanaesthesia (Loss of Vibratory Sense)", an early diagnostic sign of combined sclerosis, the symptoms in part resembling anemic spinal disease.

The author states "A subacute combined degeneration of the cord or progressive funicular myelopathy gives rise to a syndrome frequently observed during the course of pernicious anemia, leukaemia, severe diabetes, and other cachectic states, with lesions of the pyramidal tracts and dorsal columns.

The symptoms of the lesions in the dorsal columns include subjective paraesthesias, numbness and tingling, especially in the toes and fingers, and objective disturbances in postural and vibratory sense. The lesions involve the posterior and lateral columns and at times the dorsal cerebellar tracts. As in the previous paper, the author notes that the pupillary responses are seldom altered.

Dr. John R. Oliver has an article on "Greek Medicine" from a historical standpoint interspersed with some good stories on Aesop and sidelight on Hippocrates.

One of the most practical papers is by Drs. I. W. Held and Irving Gray on "Gall Bladder Disease".

Volume IV, 37th series, contains a collection of 25 selected clinical lectures delivered before the members of the 1927 European Interstate Post-Graduate Medical Association of North America, by clinicians in Germany, Norway, Sweden, England, Scotland and Denmark.

Under the caption of "Diagnosis and Treatment" we find a very interesting and instructive paper by Robert Hegner, Ph. D., department of protozoology, Johns Hopkins University, Baltimore. He gives the percentage of the commonest varieties inhabiting the mouth, intestinal tract, vagina and urinary passages.

He says the diagnosis depends upon finding the protozoa and not upon the clinical symptoms. Culture and concentration methods have been devised and serological tests suggested but the latter are not yet well worked out for practical use.

"Only three of the 15 well-authenticated species of intestinal protozoa are known with certainty to be pathogenic to man.

Endamoeba gingivalis, which lives in the mouth, especially in the tartar of the teeth, and in the material alba around them, was at once time considered to be the etiological agent of pyorrhoea alveolaris, but more recent studies indicate that it is probably non-pathogenic."

Various other types are described and illustrated by drawings. The method of collection and outline of the steps in the preparation and staining are given.

This one article is well worth perusing, especially for the method of staining smears by the Heidenham iron-haematoxylin process.

Dr. William Lintz, read a paper before the Interstate Clinicians on "Consideration of High Blood Pressure; Small Lungs", in which we find the following statements in his resumé.

"Hypertension is responsible for more deaths than tuberculosis and cancer combined.

"Heredity is the most important known factor.

"Sodium chloride is not a factor in hypertension.

"Hypertension cases stand operations well, hypotension cases poorly.

"When blood pressure is stable few symptoms are present, many symptoms when labile.

"Not only variations, but long remissions frequently occur in hypertension.

"The endocrine glands have an important bearing in hypertension.

"The diastolic pressure is more important than the systolic.

"A dropping blood pressure in old age means cardiac weakness.

"Smoking is injurious in hypertension, etc, etc."

The volume concludes with "Medical Questionnaires" by Dr. Henry W. Cattell, who discusses the answers to all sorts of questions, ranging from the right of an osteopath to dispense narcotic drugs, to the most recent theories in regard to the relations of Homo sapiens and the Neanderthal man.

GRAY.

Mental Hygiene Problems of the Population. First Issue of Collected Papers of the Ukrainian State Institute of Psychiatry and Mental Hygiene. I. G. Iljon, Editor, Kharkov, Ukraine.

The present volume of some 400 pages is the first issue of collected papers from the Government Psychiatric and Mental Hygiene Institute in Kharkov, Ukraine. In the short introduction Dr. Iljon, the editor, outlines the program of the recently organized Institute which is under the leadership of Professor V. P. Protopopov. The Institute will have several departments: 1. Department of prophylaxis and eugenics. 2. Clinical department. 3. Department of mentally defective children. 4. Medico-legal department. 5. Experimental laboratories. 6. Department of statistics. Not all of the departments are in operation. The present volume contains contributions from the department of prophylaxis and eugenics. The main part of it is occupied by a number of articles by the editor, Dr. Iljon, dealing chiefly with the problems of mental hygiene and occupational therapy. In his first paper which deals with the problem of dispensation of psychiatric advice he reviews the history of the mental hygiene movement and pays particular attention to the progress made in the United States. The nucleus of the wide scheme devised by him is a psychiatric hospital which will take care not only of psychotic patients who have to be committed but also of the mental hygiene of the community. This hospital will consist of a colony of workers, hygiene village and a refuge for chronic psychotics and mental defectives. Another feature of this hospital is the ambulatory dis-

dispensary to provide medical help and advice in mental hygiene for the community. The staff of the dispensary takes care of discharged patients and also makes home visits.

In another article which deals with occupational therapy the same author emphasizes the necessity of making occupational treatment individual in character so as to awaken the social occupational instincts in each patient. He pays particular attention to the biological conception of mental disorders and environmental influences in determining the type of occupation for the individual patient. He thinks that in disease the biological nucleus has to be treated, but no more than the environment. This consequently leads to improvement in the general conditions in the community as a prophylactic measure and in the patient himself. In cases of psychopaths and drug addicts, the training must be particularly severe and if necessary compulsory in special colonies or hospitals. For better understanding of the type of treatment, the personality of the patient has to be carefully studied. He finally makes a suggestion that the therapy should be conducted by individual psychiatrists outside of the hospital, in the "hetero-family patronage"—an open institution and finally in the hospital. He has great faith in the future of the working villages.

In another article the same author gives the result of the use of occupational therapy for a period of five years from 1922 to 1927. He comes to the conclusion that the oligophrenics make the bulk of the occupied psychotics followed by epileptics, schizophrenics and paranoics. The latter seem to be the most persistent in their work followed by schizophrenics, epileptics and paretics. Women seem to be less persistent in their occupation. He is in favor of group occupation and also of special training of the occupational therapist giving him careful instruction as to the aims of occupational therapy and the significance of personality deviations in the psychotics.

Interesting is the result of treatment with malaria inoculation in paresis by A. L. Lestchinsky. This type of therapy was instituted in the Ukraine in 1924, in Leningrad and Moscow in 1922. Their percentage of remissions is as high as 64 per cent (almost twice as high as observed in the Western European countries and in this country). There was a higher percentage of remissions among women than men and he makes an attempt to explain this by the fact that women are less exposed to stress in their more or less sheltered home environment. Age seems to have little bearing on the possibility of remission. There is a higher percentage in the cases of early stages of paresis. The highest percentage, 78.2, was observed in the expansive group; the smaller percentage, 43, in the agitated group. The last group showed a high mortality rate, 28.5. In tabo paralysis the treatment was not

efficacious. Best results were obtained with a high number of paroxysms (12 or 15). The unfavorable prognostic features are the paranoid hallucinatory episodes during malarial treatment. There were no advantages seen in the combined treatment of malaria and neo-salvarsan. Out of 40 patients, 14 had a remission for over two years. Relapses have been observed in four cases.

In a further article by Pastchenko and Lazarev, an attempt is made to give statistical data in regard to occurrences of mental disorders and especially of general paresis in a period of ten years, from 1915 to 1924. They came to the conclusion that there has been a decrease of 33 per cent in admissions of all types of mental disorders in the five years from 1920 to 1924, compared with the period from 1914 to 1919, and especially a decrease to half the number of the admitted paretics. The number of male admissions is almost twice that of the female. The ratio of male to female paretics is about $7\frac{1}{2}$ to 1. The highest number of general paralysis cases occurred in the tenth or fifteenth year after the initial infection. The average duration of general paresis is about one and one-half years.

In an article on the problem of the community life of psychotic patients, Jerebttzov outlines the treatment in the open department of the Institute. The social occupational instincts are activated. Attempts are made to awaken interest in different kinds of occupation. He begins with the elementary type of occupation and gradually goes over to the most complicated types. Besides occupation, other activities were used such as group exercises and group play. The work is usually guided by trained instructors under the leadership of a psychiatrist. After a certain period of occupation in closed classes or shops patients are transferred to the open ones.

In an article by Subotnik, the etiological factors of mental and nervous disease are reviewed with particular attention to the social etiology for the period previous to the era of capitalism, during the period of capitalism, then during the period of the World War and the Russian Revolution. The factors of civilization, sex, age, standing in the family group and heredity are taken into consideration. The psychogenic factors, the factors of exhaustion during the famine period, toxic influence, chiefly alcohol and syphilis, are specified. He came to the conclusion that the social environment and the neuropsychic organization in the individual are important factors in the departure from the normal psychic activity. The neuropsychic organization belongs to the social biological order which undergoes changes with the historic development of men. The departures from the normal neuropsychic functions are explained by the results of the class struggle. With increase of class antagonism in society, the neuro-psychic anomalies become

more complex and modified. Social order in the sense of government has its own neuro-psychic illness. The social etiology in the pre-capitalistic era depended chiefly on national disasters such as epidemics and on psychic poverty. The social etiology in the period of capitalism is based on the peculiarities of the class struggle, the uncertainty of the future, and on alcoholism and syphilis. The war and revolution together with the other changes modified the psychical and the neuro-psychical obstinacy and opposition. War and revolution temporarily increase the frequency of mental illness in general and especially of the hereditary psychoses and the reactive conditions, the number of alcoholic psychoses is decreased. Neuropsychic changes are increased in workers with advancing age and duration of labor. Psychotic disorders constitute 8 per cent of all invalids in the Ukraine. The mortality from psychoses in the urban population of old Russia ranged between 5 and 10 per cent. He finally gives a few ideas as to therapy and prophylaxis and emphasizes labor which has a hardening effect on the constitution, improvement of conditions of women during pregnancy, eugenic propaganda among the masses, suppression of alcoholism and syphilis, avoidance of pathological fatigue and organization of qualified professional consultants.

In still another article the same author (Subotnik) took up the relationship of pathology of the nervous system to different professions and came to the conclusion that in liberal workers, such as teachers, the psychophysiological factor is more important than the sanitary hygienic factor. He tries to explain this by the fact that the nervous system in the former is more burdened than the other systems, therefore the frequency of illness in these instances is greater than in the industrial groups. As prophylaxis he advised physical training, physical culture, regulation of relaxation and rest in order to increase the resistance of the nervous system. In workers at manual occupations in small enterprises, printers, operators, shoemakers, the basic etiology will be of the sanitary hygienic order, such as dust or an uncomfortable position of the body during work. With the transition to higher form of industry where the buildings in which the workers are occupied are more spacious and factory conditions are better, mental or nervous illnesses are less frequent than in the small enterprises. Besides the sanitary hygienic factors he adds the extreme tension required in work with machines. The material of this work was taken from the statistics.

In another paper dealing with neuropsychic disorders in the conscripts in the Ukraine, he comes to the conclusion that the number of psychiatric conditions among the conscripts has grown constantly since the war in all European countries. In the agricultural countries the number was somewhat

lower than in those where industry prevails. In the Ukraine 3.01 per cent of the conscripts had to be excluded from military service on account of mental and nervous disorders prior to the war. After the revolution the percentage went up to 5.9. These cases were principally mental defectives before the war and psychoneurotics after the revolution. The analysis further showed the dying out during the war and the revolution of a few groups such as idiots and epileptics.

Landkoff in an article concerning alcohol and neuropsychic health made quite an extensive study and advocated methods of combating alcoholism which are similar to those in the United States. He proposed larger production of soft drinks, opening of libraries and tearooms, encouragement of all kinds of sports, the prohibition of new stores for alcoholic beverages and the sale of alcoholic beverages on non-working days in worker's clubs, hotels, teahouses, restaurants and amusement places, etc. He advocates anti-alcoholic propaganda wherever it is possible and compulsory treatment of alcoholics. Interesting is the figure of 500,000 alcoholics registered in the cities of the Union.

NOTKIN.

Manhattan State Hospital,
Ward's Island, N. Y.

Syphilis. By CHARLES C. DENNIE, M. D., Assistant Professor of Dermatology, University of Kansas. One of a Series of of Medical Monographs from Harper and Bros., 1929. \$2.50.

At last we have a short but completely practical monograph on that protean disease, syphilis. Dr. Dennie has compressed in this little volume the experience of many years of observation and treatment. He has the happy faculty of expressing himself clearly and tersely, as if he were addressing you personally.

This is a book adapted to the assistant physicians in the State service. It is small enough to go into a coat pocket and should be carried about until every chapter is thoroughly read and fully digested. One feels, when reading it, as though he could welcome a short respite from his daily ward duties, in order to sit down and read a chapter or two, then go on with more energy than ever.

Two chapters on the pathology of early and late syphilis open the discussion. There are few references to the work of others, no long dissertation on the history of the disease, simply a few brief statements made in the light of modern knowledge on the chancre and the *treponema pallidum*, its growth and multiplication after entrance, a resumé of the eruptions, and

secondary stages. In chapter two he divides the pathology of late syphilis into four phases: the stage of invasion; the stage of infiltration; the stage of resolution and lastly, the stage of scar formation. They are common to all syphilitic processes, no matter what special tissue is involved.

In chapter four in a discussion of the Wassermann reaction and the diagnosis of syphilis he says: "The finality of this test has been accepted by so many that it has retarded progress in both the treatment and the diagnosis of syphilis."

In spite of the great advance in biological chemistry as an aid in diagnosis the keen observation and clinical acumen of the well trained man remain supreme. One must always remember that syphilis is not a constant disease, but one with peaks of activity when the blood serum contains a high titre of demonstrable syphilitic substances, and intervals of inactivity when the production of these discoverable bodies is at a low ebb or even absent.

The fluctuating nature of syphilis has its effect upon the Wassermann reaction, and it is easily conceivable how the effectiveness of this procedure may be influenced by a number of facts. Three factors must always be kept in mind. First, the presence of a positive Wassermann or the presence of syphilis in a patient does not produce an immunity against any other disease. Second, the presence of a negative Wassermann in the blood or cerebro-spinal fluid, or both, certainly does not definitely deny the diagnosis of syphilis in a patient with or without the typical symptoms of this disease. Third, the presence of a persistent Wassermann reaction in spite of all treatment certainly does not mean that the patient will end his days in an insane asylum or fill an untimely grave, because of uncontrollable somatic involvement."

In taking up the chancre, in particular, he not only describes it in a new setting of words but compares it with chancreoid and other growths from the angle of differential diagnosis. Early and late skin manifestations receive good consideration and are differentiated from other diseases.

One of the best chapters in the entire book, and one where we find the most references is the sixteenth, where he takes up "Cardiovascular Syphilis", giving the symptoms and treatment.

Having so thoroughly enjoyed and agreed with the author in the general discussion of somatic syphilis we are disappointed that he does not carry on more fully when he takes up neurosyphilis, to which he devotes only five chapters.

The rest of the book, in general, concerns the various methods of treatment, including the Swift-Ellis-Oglivie treatment, tryparsamide, malarial, arsphenamine therapy, etc. The procedure, oftentimes illustrated, is out-

lined, dangers and contra-indications accentuated, complications and results of treatment noted, making these chapters very valuable to the man handling this type of patient.

The advantages of this volume are its small size, richness of material of practical value, and the ease with which one can understand the author.

If the forthcoming Harper Medical Monographs are as good as the one on syphilis the physician can provide himself with a library of handy books that are inexpensive, authoritative, modern and above all not full of unessential material.

GRAY.

The Physician Throughout the Ages. Volume 1. Illustrated. Edited by Arthur Selwyn-Brown, B. Sc., M. A., Ph. D., LL. D., Assisted by Distinguished Medical Specialists, 1928. Capehart-Brown Company, Inc. Publishers, Times Building, New York, N. Y. In two volumes.

The first volume of this compilation has now been placed upon the market. It is an excellently bound, profusely and artistically illustrated book of 848 pages.

The editors in a foreword to the volume announce:

"It is the purpose of this work to follow the development of the physician from the remotest times to the present with sufficient detail to enable the reader to form his own conclusions regarding the status of the profession at any given period. Biographies of the outstanding practitioners since classical times are given, also biographical sketches of prominent American physicians of the past century.

"A unique feature of this work, and one that will be found invaluable to every practicing physician, is the series of brief histories of the men who through their researches have contributed to the advancement of the special branches of medicine. Each of these histories was contributed by a recognized specialist and is a thoroughly authentic work.

The first chapter, headed "Primitive Medicine and the Medical Men", is followed by a chart headed "Recorded History Back to About Eight Thousand B. C.", and by a list of archæological races and culture. Subheads are entitled "Origin of Life"; "Evolution a Lengthy Process"; "What Fossils Teach"; and a graphic chart is appended showing "The Ascent of Man", supplied by the American Museum of Natural History.

The second chapter pertains to myths, magic and symbolic incantations and treats of the part played by myths in early medicine; their effect in developing medical lore and their suggestion of supernatural power are also discussed.

Early Chinese medical treatment is given in some detail, hysteria and its treatment described. Eugenics, heredity and environmental conditions and their improvement throughout succeeding ages are given suitable consideration. Treatment in a Greek hospital in the time of Hippocrates is illustrated, the use of non-poisonous snakes in hospital treatment being shown by interesting cuts.

Early oriental physicians, Sumerian, Babylonian and others, are given appropriate space and the work of physicians of ancient Egypt is also described.

In succeeding chapters Dr. Brown and his associates have lived up to the plan and scope described in the foreword. Condensed but helpful are the descriptions of the lives and accomplishments of the medical giants of the different countries, and interspersed among various chapters are copious references to the developments in psychiatry and the treatment of mental disorders. The accompanying illustrations (which include a reproduction of the fine painting of Fleury, descriptive of Pinel's reform work at the Salpêtrière), of Dr. Rush, Charcot, Ehrlich, Mott and Wassermann will be of special interest to the readers of the *QUARTERLY*.

If the second volume approximates in interest that of the first, now before us, the work should find a place in every medical library, if for no other reason than its obvious value as a reference book.

MC GARR.

Peculiarities of Behavior. Wandering Mania, Dipsomania, Cleptomania, Pyromania and Allied Impulsive Acts. By WILHELM STEKEL. Authorized English Translation by Dr. James S. Van Teslaar. Boni & Liveright, New York.

This work by Dr. Stekel consists of two volumes of 328 and 341 pages respectively. There are fifteen chapters in these two volumes, the titles of which are:

VOLUME I

1. Instinct, Affect, Impulse and Primordial Reaction
2. The Craving for Travel: Dromomania
3. Traumatic Experiences: Analysis of a Parapathic Delirium
4. Narcotomania (Drug Habit)
5. Stealing
6. The Sexual Roots of Cleptomania

VOLUME II

7. Clinical Experience
8. Case of Cleptomania, Paedophilia and Absence of Ejaculation

9. Analysis of a Cleptomaniac
10. Analysis of a Case of Cleptomania
11. Pyromania
12. Analysis of an Incendiary
13. The Gambler
14. Psychic Treatment of Tic
15. Retrospect and Survey

Each chapter has an excellent outline of all the subtopics considered therein, which is of value as a reference to individual subjects after reading the books.

The book is prefaced by some remarks by Dr. Van Teslaar in which he calls attention to the fact that in these volumes: "Cleptomania, gambling, pyromania and allied impulses are subjected to the most thorough scrutiny which they have thus far received in the history of psychology . . . One of the most encouraging features of the work is the proof it furnishes that many peculiarities of conduct which have heretofore baffled sociologists, physicians, legislators, criminologists and others interested in human welfare are amenable to psychotherapeutic re-education."

He also adds: "Claude Bernard, the eminent French physiologist, has stated that the time will come when the philosopher, the poet and the scientist will speak the same language so they will understand one another. Psychology seems particularly well suited to serve as such a common vehicle of expression; and Dr. Stekel seems to possess the loftiness of the philosopher and the intuitive insight of the artist along with the rigorous technique of the scientist."

Included in this translator's preface is a short biography of Dr. Stekel's life, pointing out his relationships to the psychoanalytic school.

Book I contains for the most part Stekel's ideas regarding wanderlust, drug addiction and stealing. A very extensive discussion is devoted to the cleptomaniacal group of thieves.

Since the individual chapters do not readily submit themselves to outlining, certain points of view which he maintains will be mentioned. It is recognized that many of his assertions are open to discussion; some of them, in fact, do not seem wholly justified on the basis of the evidence he gives. However, the reviewer tried so far as possible when he found assertions that seemed unwarranted, to maintain still an open mind, since the fact was taken into account that probably Stekel had proved his assertions to himself, but that in certain instances he had neglected to insert his evidence in proving a point.

In his chapter on Instinct, Affect and Impulse, he says: "The life instinct is the instinct for gratification, expressing itself in every human being as an innate craving for happiness. Happiness is an enhanced sense of living generated by pleasurable feelings (or following release from unpleasurable feelings)," (p. 7) . . . "The imperative of the social group is called morality, ethics or law," (p. 8). He explains that no action is in itself immoral, but it becomes so only in relation to time, custom, country and environment. (p. 9) . . . The two most important manifestations of the life instinct are hunger and love. Hunger serves current life; love takes care of future life. Sexual instinct and nutritional instinct are the two basic components of the life urge." (p. 7).

"The so-called immoral deeds are very frequently impulsive. The criminal acts with foresight; he puts himself beyond current morality. The parapathiac pleads his impulse. . . . An act committed while our reason is overwhelmed we call impulsive. . . . Impulsive acts are carried out while the inhibitions of ordinary consciousness are suspended." (p. 9).

Among the impulsive acts are wanderlust, stealing, arson, fetishism, exhibitionism, etc. Stekel calls these the "parapathic impulses". He explains further on (p. 11): "It is a characteristic common to all parapathic impulses that they represent a 'craving for repetition' ". The subjects run after an infantile impression, an infantile pleasure. Apparently going ahead, in reality they are going back to childhood pleasures, i. e., 'infantile euphoria' ".

"The most important primal reaction is the instinct of self-assertion (will to power). The will to power is the will to make another's possession one's own. This primordial reaction I call the 'egoistic reflex' . . . Many parapathiacs contemplate a world catastrophe which should leave them the sole survivors. Everything belongs to them. They want to possess all the women, own all the treasures, etc."

"The sexual primordial reaction is even more important. The primitive man appraised any creature he encountered with reference to the latter's sexual worth: What sexual pleasure can you yield me? . . . Consciously or unconsciously we disrobe every stranger with whom we become acquainted . . . and appraise the degree of pleasure which a possible sexual intercourse would eventually yield. The glance at . . . the secondary sexual characteristics is a look intended to appraise the qualities of the possible partner. Men are much more candid in this respect and think of it without any particular inhibitions."

"The average man's impulsive acts have an onward trend. The trend of the parapathiac's impulses, as shown in his work, is directed backwards

. . . Exhibitionism is an impulse overtly sexual, whereas the impulses described in this work, kleptomania and dromomania (wanderlust), pyromania and dyspsomania, etc., hide their sexual character. . . . We shall prove that these varied clinical pictures have a common basis; like exhibitionism they are so many manifestations of psycho-sexual infantilism."

In the following chapters Stekel quotes case histories in support of his theories of a sexual basis for all of the paraphthies mentioned. He states: "Analytic experience shows that morbid dromomania arises when the self is split and the conscious personality unable to meet the demands of the instinct-self . . . he is an emotional anarchist, bent on expressing his primordial reactions (schizophrenia) (p. 23) . . . Deserters have often been treated unfairly during the war. Very many of them were mentally deranged (wanderlust), as a number of clinical investigations have shown."

Stekel distinguishes three types of dromomania. (1) A centrifugal dromomania (wanderlust) called a "fugue" or "flight from home" (running away from one's parents, marriage, country or from one's past life). (2) A centripetal dromomania, the dromomania proper or flight back home (nostalgia, longing for the parents, running away from marriage, desertion, flight back to one's own past life). (3) A circular wanderlust, or "poriomania", which apparently impels the victim to leave home, though what he really seeks in symbolic form by his wanderlings is the land of his youth, i. e., he longs for home—the paradise of childhood.

"The subjects of sleep walking are persons fighting with temptations repellant to the consciousness. In the daytime their various moral and religious inhibitions are effective. During sleep some of these inhibitions are removed and then the unconscious prompts them to commit some deed which at last, becomes expressed in some form of motor activity. I have treated a man who every night approached a relative's bed while asleep and had to be led back. In the morning he knew nothing about it. I found out that, because he was impatiently awaiting his share of the inheritance, he wanted to kill his aunt. During the daytime he was a most considerate and solicitous nephew. But at night his dark, murderous thoughts found an opportunity of impelling him to carry out a sort of symptomatic act. In his sleep walking he always approached her bed; there he stopped, making a sawing motion in the air, a motion which obviously represented the act of striking her with a dagger."

"I have dwelt so extensively on the criminal impulses breaking out in dreams and during dream states because the Freudian school always dwells on the sexual, neglecting the criminal impulse (p. 35) . . . I shall not deny that incestuous wishes also play a significant role in sleep walking. Thus I

knew a grown-up man who wandered in his sleep and stopped at his mother's bed; also a brother whose sleep walking carried him always to one person, his sister. A woman patient told me that night after night her fifteen-year-old sister . . . wandered to her brother's room. Homosexual cravings, entirely unknown in consciousness, are even more often expressed through sleeping walking. I have under treatment a soldier who wandered in his sleep every night until he stopped at his comrade's bed."

It is pointed out that longing for home (nostalgia) is but the longing for mother (according to Tausk). Stekel feels, however, that "longing for the family" would be a more correct statement. "The cause of the morbid longing for home is a morbid fixation on the family . . . Many a murderer is himself unaware that when he kills his victim he really slays his father or some one who earlier in life had roused his thirst for vengeance. It is the modern medico-legal expert's duty to investigate and clear up every problematical instance of crime, through the aid of analysis; to investigate whether some traumatic determinant did not rouse to activity, dormant embryonal (infantile) impulses." (p. 91)

In the next chapter Stekel devotes a little over 100 pages to the history of a case of what he calls "flight into parathiac delirium (hysterical delirium)". This is given in the form of the patient's autobiography. The patient's story (a woman, married, age 36) is extremely detailed and a mere outline will be given, therefore.

As a girl, the patient had been courted by a medical student, who jilted her when her family lost its fortune. In spite, she married the first man who presented himself, learning too late, however, (on their wedding night) that he was wholly impotent. Attempts to analyze his condition, spread over seven years' time, brought no improvement in the condition. She then sought gratification elsewhere and first called on her original fiance—now a practicing physician—and this eventually led to coitus; her pretext being that she wanted a child. She left ungratified, however—and to her disappointment did not become pregnant.

Next she became the mistress of a man who was neither elegant nor handsome. However, she hoped to find the pleasure she was seeking with him—but did not, even though she tried to picture herself in the full abandonment of the prostitute by making him pay for her love (she did not need money—her husband had a profitable business).

Next she consorted with a colonel, a stately man who treated her respectfully. As a result of this liaison she became pregnant. "She did not find it hard to suggest to her husband that one of his timid attempts at last proved effective." But three months later extra-uterine pregnancy was diagnosed, and an operation cut short her dream of motherhood.

Three lovers having failed to gratify her, she next associated with a young orthopedist who was treating her husband. However, she did not attain gratification with him, though he gave her a thorough schooling in the technique of love. She next met a man—an artist—who she believed hypnotized her—and eventually she indulged in various types of sexual play with him. He succeeded in getting her to perform various perversions, yet she did not attain gratification. As a result of this liaison her parapathic delirium finally occurred. The details of this are vividly described by the patient even up to the point where she is brought to Stekel for treatment.

The detailed analysis of the case is of interest—of note is the fact that her continued frigidity was due to a fixation on her brother—and therefore she could not give in to any other man without breaking her faith (unconscious) with her brother.

In his chapter on narcotomania (drug addiction), Stekel states, "All these narcotic drug addicts are persons of impulsive temperament, impelled to induce narcosis in themselves in order to suppress some unbidden impulse." He traces cases to various parapathies (mental conflicts), giving detailed case histories where morbid sexual life plays a chief role as a causative agent—sadism, necrophilia, paedophilia, zoophilia, homosexual and incestuous fixations being listed.

"All narcotomaniacs, particularly the drinkers, admit that they indulge in order to overcome an inexplicable dread. It is the fear of a crime that manifests itself—the fear of self. Ethical inhibitions change the impulse into a fear of the impulsive promptings . . . The drug relieves the depression and brings about a euphoric disposition."

On the subject of stealing he quotes the proverb: "Everyone is a thief in his way." He explains that all composers and writers plagiarize, which is stealing—even though in many cases the plagiarism may be unconscious on the part of the composer (or writer). He cites the phenomenon of "cryptamnesia" as evidence of this—which means unconscious plagiarism. "I hear a melody in my childhood. Apparently I have forgotten it—the melody abides no longer in my conscious memory. One day, in composing a song, I make up the melody, which, sounding new to my consciousness, appears to me as an original creation."

On the whole this chapter on stealing is written in a rather helter-skelter manner—and Stekel at times does not make his points very clear.

A long chapter is devoted to the sexual roots of kleptomania. Stekel explains the difference between criminal stealing and kleptomania. "The act of stealing brings no joy to the thief—the stolen object does . . . The kleptomaniac, on the other hand, steals for the sake of stealing. He craves

the excitation of carrying out the outlawed deed . . . The cleptomaniac's theft is an impulsive deed; the thief's action is also instinct-behavior but it stands under the control of the intellect."

Numerous cases are cited in support of his theories. It is noted that wealthy women are often found guilty of stealing from the large department stores. "*All these cleptomaniac deeds are traceable to ungratified sexuality.* These women struggle with the temptation. They yearn for their 'adequate form of gratification' . . . They are ready to indulge in what is forbidden. But they lack the power. The larceny is a symbolic act for them Gross relevantly observes that the source of the cleptomania stands plainly revealed: 'secretly to take hold of something', is a motive common to both—the sexual wish and the tendency to steal; this associative connection is responsible for the shifting of the affect-energy from the sexual motive, which consciousness cannot tolerate at all, to the act of stealing, which in thought at least is, characteristically enough, more easily tolerated. Once this shifting of the affect becomes contextually fixed the tendency to steal persists as the 'symbol' for the craving after sexual gratification and eventually it assumes the whole affective value, absorbing the whole impulse energy which belongs to sexuality. And this displaced affect determines the morbid compulsion . . . The fundamental motive may be formulated, approximately, as follows: 'taking secretly something forbidden'."

Stekel describes cases of women in which stealing induced the same full orgasm as normal intercourse. On examining and taking hold of the article about to be stolen (in a store) strong sexual excitation with profuse secretion is experienced. At the time of menstruation (when eroticism is highest) the craving to steal is strongest. Apparent proof of the sexual basis for the cleptomania is found in the statement that with the awakening (in one case) of the woman's libido during intercourse with her husband (she had previously been frigid) and the consequent disappearance of her sexual anesthesia her larcenies ceased.

He describes cases in which the pressure of infantile incidents, craving repetition, are the cause of the cleptomania. For example, a young man who at an early age indulged in sexual relations with his sister—his stealing was shown to be a morbid symbolic wish for repetition of this tabooed act. Homosexual cases are also shown to become cleptomaniacs—the stealing likewise being a symbolic means of gratification. "The act (of stealing) in itself has its significant symbolic value; it stands for some other act which is part of the subject's past and it amounts to a game; it is a compulsive repetition."

Book II opens with the chapter on Clinical Observations, which is really a continuation of the previous chapter, and gives more cases in support of his theory of the sexual basis of cleptomania.

A man of twenty years steals a sum of money from his father and goes to Vienna and remains there. Analysis brings to light the fact that the day before he made sexual advances to his sister of eighteen—she did not reject his advances. He controlled himself, however—and the next day stole the money that enabled him to escape from his morbid temptations. Thus his stealing is the means of self-protection against impulses. "The parapathiac is afraid of himself, i. e., afraid of his impulses."

A girl of twenty-two steals 3,000 marks from a family where she was employed. The analysis shows that she had a strong homosexual attachment, with overt practices, to a school teacher. Her parents accidentally learned of the sensual character of the relationship, and they placed her in a health institute—meanwhile the teacher married and repulsed her when she returned home. She thus became a criminal because she hated someone (her former homosexual partner). "Whoever hates another hates the whole world." On the basis of this and other cases, Stekel says: "in every case of kleptomania it is our duty to search for the homosexual root."

The case of a twenty-three-year-old theological student—a latent homosexual, is described, who was eventually seduced by another (homosexual). His thefts occurred after he had been repulsed by some persons who took his fancy. He stole mostly sexual symbols: walking canes, umbrellas, pencils, fountain pens, etc.

George Manolescu, "the king of thieves", is described, in whom the first homosexual impulse was turned into kleptomania. A sensuous Turk made advances to him—this annoyed him—though for a second he may have considered the offer. But instead he stole the Turk's pocketbook and departed as soon as the opportunity offered itself.

The bipolarity of all psychic phenomena is brought out. He describes parapathiaes who suffer from a "giving or lending mania". Analysis discloses that these persons desired to give themselves away (sexually). In describing one case he writes: "Her giving mania was a substitute for her craving to give herself. Every article that was given her was likewise a symbolic fulfillment of her wish that the giver give himself to her . . . As a rule we may say: persons who always distribute presents are unreliable and expect payment with interest and with compound interest."

"It is noteworthy that most kleptomaniacs do not recognize the sexual character of their deeds. The fetishists are aware that they steal for sexual reasons. A man who collects women's handkerchiefs told me that at the moment when he steals a handkerchief from the woman's pocket, he has an ejaculation."

The author analyzed a man who found himself completely impotent hetero-

sexually when he became an adult. Through analysis the man attained full maturity psychosexually, and displayed normal potentia in his married life. The psychic determinants for his infantile fixation which prevented his attaining potent heterosexuality were shown to be repeated incestuous relationships of various kinds (fellatio, cunnilingus, coitus) with both his own mother and his aunt, during his childhood, adolescence, as well as later years. Stekel states at this point: "I take this opportunity of emphasizing that love episodes between mother and son are very frequent (not quite so, between father and daughter) . . . children who sleep with their mother in bed are readily exposed to the danger of such traumas." He also quotes a novelist who portrays an incestuous relationship between mother and son in one of his books, as saying: "He who has once enjoyed the most intimate relationship with his mother can never love another woman." One can easily see the relationship here of the conditioned reflex—the conditioning necessarily being more pronounced and less easily broken up, because of the extreme degree of emotion under which the original conditioning occurred.

Next are given two detailed analyses of cases of kleptomania. Discussing these two and the case above described, he writes: "The first of the three analyzed subjects is unable to experience sexual acme because his mind is always on another person (his mother). The second lives abstinetly (sexually), although as a player, he is surrounded by temptation. The third wants to keep himself chaste so as to be sure of his beloved's chastity; *and all three are dominated by the Oedipus complex*, which is certainly far from accidental. All preserve a tremendous potential sexual energy which may be released, as kinetic energy, temporarily, in kleptomaniac deeds."

"The kleptomaniac parathy is most intimately linked to a cryptic identification with the mother and finds its symbolic dissolution also in the equation: jewel=mother . . . The three cases are dominated by the same impulse: to take during sleep, something which one's consciousness forbids taking during the waking state (coitus with the mother)."

A few of the author's cryptic remarks on pyromania follow: "We also find that pyromania breaks out in children frequently at the time when they encounter the sexual problem. . . . It is not easy to overlook the sexual motives of pyromania . . . like kleptomania, the offense is usually committed at the time of menstruation and postulates endocrinic influence . . . We frequently find that the heightened sexual excitation incidental to menstruation, or pregnancy releases the pyromaniac impulse. . . . Corporal punishment by the beloved person is very frequently the incentive to arson . . . Just as the primitive folk compared fire friction with sexual congress . . .

so does our unconscious use fire as the symbol of the gratification—craving, release—searching libido.

“Anesthetic women, too, display pyromaniac impulses. I have a number of patients suffering from dyspareunia, who longed for a great fire to overcome their frigidity. The wives of impotent men are also prone to pyromaniac impulses.

“Among the pyromaniacs we find advanced morbid individuals (psychopathic inferiority, degenerates, criminals, victims of moral insanity) . . . There is but one instinct which generates the impulse to incendiarism, the sexual instinct, and arson shows clearly its connecting points with sex.

“Masturbation is more often linked directly with arson fantasies. I have been impressed by the fact that arson is often carried out during a period of abstinence, i. e., when the masturbator attempts to curb the habit. . . . It is known that I have called masturbation a habit having a socially protective function.” In this connection, Schmidt in discussing a pyromaniac, states: “Indeed had he masturbated on the evening when he set the fires, he might never have committed the offences.” Deprived of the habit (even through self-denial), the impulse to masturbate becomes transposed into the impulse to commit arson (Stekel).

“The relationship between arson and alcohol indulgence . . . is not merely that alcohol removes the inhibitions. The cause of drink is usually the same as that of pyromania . . . Often the drinking releases the action, but often again the drinker lulls his impulse to sleep through alcohol.”

A very extensive chapter is devoted to the analysis of a pyromaniac. The reviewer, however, has the rather distinct feeling of dissatisfaction with this chapter, as a scientific contribution. The subject is a man who had spent much of his time as an inmate of three different European hospitals for the insane and was at one time diagnosed as “imbecility”. It would seem rather undesirable to draw any conclusions whatever from such a case therefore—as it is hardly fair to decide that the findings in an analyzed pyromaniac of normal intelligence would be just the same as in a case once considered as an imbecile. Furthermore the chapter is introduced with the intimation that this was the only satisfactory and complete analysis of a pyromaniac on record. If such is the case, it would seem thoroughly desirable that a number of pyromaniacs of normal intelligence be analyzed before presenting the material as scientifically conclusive evidence.

In his chapter on the gambler, Stekel says: “The gambling mania is a regression to childhood . . . It is in the first place, a fight for one’s personality, for the supremacy of one’s selfhood, for superiority. It is unquestionably true, although the truth is unacknowledged, that every person considers himself the shrewdest . . . The gambler has faith in his good luck . . .

"Gambling and sexuality stand in a certain contrast which popular fancy has crystallized already in saying 'Lucky in the game, unlucky in love' . . . this is the truth—but in the reverse sense: Persons who are unhappy in love console themselves by playing."

A case is given in which a married man who had believed his wife entirely monogamous and faithful to him, suddenly finds she is unfaithful—and not with only one other man but with five other lovers. To one of these she even presented gifts as love tokens, bought with the "pin money" which she had extorted from her own unsuspecting husband, in payment for the love tendernesses which she allowed him, and would not offer voluntarily. There were two children—and as she thought that they were not his own tormented him continually he lost entirely his interest in his wife (or any other woman) though she now "wanted only love . . . forgetting the past, and forgiveness. She wanted to purge herself clean in the flames of marital love."

As a result of this marital disillusionment he began to drink and gamble. Whereas he had never before followed the races, he now has no other thought than betting on the races and often runs badly into debt with his betting. The analysis revealed an incestuous fixation on a sister and the mother and since he treated his wife as a mother substitute she sought sexual relationships elsewhere on a more mature plane.

The chapter devoted to the psychic treatment of tic is of considerable interest. A case of Janet's is cited: A woman, raising herself in bed, twists her body to the right, while her eyes bulge with an expression of hatred and fury, saws sideways in the air twice with her clenched fist—repeats this motion 80 times in succession. In her later hysterical delirium she gives the explanation: Her father-in-law had attacked her with the intent of committing sexual assault.

"Every forbidden thought, which is not tolerated in consciousness, may become expressed motorially as a tic. An engineer, 34, has a recurrent tic in which he stretches his abdomen forward and hollows his back. Analysis disclosed the fact that his aunt had performed fellatio on him when he was seven years of age. The tic represents on the one hand, the memory of this incident; on the other hand, the wish for its repetition.

"Tics are extraordinarily common as masturbation substitutes. A boy rubs his nose as a masturbation substitute. Other patients stick their hand in the trouser pocket and reach for the genitalia with tic-like motions, without knowing it." Other examples are given.

A 32-year-old engraver has a peculiar tic, in which he protrudes his lips,

trunk-like, and saliva gathers in his mouth. Analysis eventually reveals that at the age of 17 a man tried to enveigle him into an homosexual relationship (fellatio), but he refused at the time, though he has since been aware of a longing after men. The tic represented his wish to carry out fellatio (or if a woman to suck the breast). It was learned that in his childhood he had sucked at his mother's breast every time a new baby arrived in the family—and that his mother had a habit of kissing his genital organ as a means of pacification.

It must be said that the mental conflict basis (usually sexual) of the ties in the cases presented, seems well grounded, and the fact that in each case recovery occurred from the undesirable mannerism (tic), as a result of analysis, would appear to be satisfactory proof of the author's assertions.

Stekel's last chapter entitled "Retrospect and Prospect" is an excellent literary and philosophical contribution to any type of literature, and the volumes are worth perusing for the knowledge to be gained from this chapter alone. He discusses the questions that are constantly to the fore as the result of our present-day civilization and the far-reaching influences (for the worse) which the World War has had on our social relationships.

The author does not believe in the castration of cleptomaniacs—and insists that the psychoanalytic and re-educative therapy is the only one for these cases. He points out that in those cases where castration has been tried, we have no satisfactory evidence that it was successful, and he shows certain cases where no improvement whatever occurred as a result of the procedure.

He states: "I trust that the future will prove that criminals may be cured through analytic and anagogic means; and what is more important, that crime may be prevented through proper training. Aside from the serious psychopathic inferiorities, we may state: crimes are products of the environment. *The State is responsible* for the existence of criminals."

"It will be the task of the psychiatry of the future to separate the curable criminals from the incurable, (i. e., those whose criminal propensities have a degenerative basis), and turn to good account their energies, so far as that may be possible, socialize them, provide them with opportunities for usefulness, without jeopardizing the safety of society . . . Madame de Staël's beautiful sentiment 'To understand is to forgive', can be turned into a fact only through analysis . . ."

"The war has induced in us a permanent state of increased affectivity . . . Narcotomania has become epidemic . . . drinking was neither so widespread nor so recklessly indulged in before the war . . . we have seen that many of the morbid impulses break out during alcoholic intoxication. This has been proven statistically of arson and sexual assaults . . . It is

the physicians' duty to take their places among the foremost fighters against alcoholism.

"It is the aim of education to train a new generation and insure the march of progress. Individual prophylaxis of impulsive acts must go hand in hand with social prevention. Dislike of work can be overcome through a rational training which shall inculcate love for work. Such an education must be started with the younger generation. Utopia is man's enemy. The educator's chief task is to train for reality . . . Pleasure without effort! It is the secret of education to render effort pleasurable.

"The question of vocational guidance is of greatest importance . . . A pyromaniac can become an excellent fireman; the young man who dwells on the fantasy of being a woman killer may turn into a useful gynecologist; the kleptomaniac may become a guardian of law and property, etc. . . . Education should recognize but one task: to make man happy and social-minded. Those who are driven by ambition are always discontented.

"No judge should presume to pass upon a human being without a competent psychologist's careful examination. In the future the court psychiatrist will be a trained psychanalyst . . . Today man's greatest enemy threatens him from within . . . The parapathic is psychically blind towards his asocial impulses. He has repressed them during his early childhood, acts as if he has conquered them, as if he harbored no enemy within; towards the manifestations of that enemy he is blind.

"Psychoanalysis means a spiritual revolution . . . Like evolution, it is a force capable of transforming our whole social life. In England and in the United States we see already its beneficial effects in the abandonment of the ridiculous prudish attitude towards sexual problems. How long before its influence will be felt universally?"

On concluding these two volumes one is left with the distinct impression that Stekel has not proven his contentions very clearly in certain cases—either through lack of inserting the cause and effect relationships or actual lack of the basis for proving his contentions. It may be said that in certain of his cases a very clear-cut sexual basis for the parapathy (kleptomania, dromomania, tic, etc.) is shown—but in others the proof is very unsatisfactory. The fact that a history of sexual occurrences is found in a life history does not necessarily prove in all cases (to the reviewer's mind) that these sexual occurrences are the cause of the parapathy, whatever it may be. Can we not find peculiar sexual episodes in the life history of any normal adult individual?

On the other hand, even though one may disagree with him in certain instances, the reading of these volumes adds much to one's knowledge of

human nature from all angles, as he possesses such a keen insight into the psyche in all its relationships. One can readily agree with the first two assertions regarding Dr. Stekel which are found in the preface—and if he tends occasionally to slip lightly over the third attribute with which the author is credited (rigorous scientific technique)—we can excuse him in a considerable measure, because of the other two—of philosophical loftiness and intuitive insight.

ROBIE.

Shapham Court, White Plains, N. Y.

Prohibition Still at Its Worst. By IRVING FISHER, assisted by H. BRUCE BROUGHAM. Alcohol Information Committee, New York.

Professor Fisher is probably the ablest authority on the debated question of prohibition. This work is in response to what he considers a fair criticism of his former book, "Prohibition at Its Worst". The case is presented as before the bar of justice. Both sides are presented without prejudice. An identical letter was sent to representatives of the leading organizations opposing and upholding the eighteenth amendment and the prohibition statutes, Federal and State. From these typical presentation of views both sides of the argument are presented from authoritative sources and in the strongest terms possible. In the concluding chapter, Professor Fisher states his own opinions of the facts thus elicited on both sides.

The phases of prohibition at its worst are discussed in its relation to a high-powered age, its effects on youth, the attitude of physicians, deaths from alcohol, poverty, crime and disease, increased drunkenness, employment and industry, corruption of prohibition agents, appropriations for enforcement, smuggling and illegal diversion of alcohol, conditions in typically dry and wet states, the nation's consumption of alcohol, education for temperance, public sentiment, and in the light of Canada's experience. What we shall do about it is treated under the captions: Can prohibition be repealed, modified or nullified, or enforced?

It is impossible in a brief review to present anything like an idea of the valuable findings of this study. Among the outstanding facts may be mentioned: Private or employer prohibition is employed by even the Dupont Company, and as is well known has been practiced by the railroads and other responsible corporations many years. Employers' liability laws in most of the states have brought about a more absolute form of prohibition, privately enforced, than that embodied in the eighteenth amendment. Yet no voice save that of the licensed liquor traffic has been raised in protest. The overwhelming weight of scientific, administrative, and popular opinion

is on the side of public as well as private prohibition of the liquor traffic. Henry Ford is quoted as saying: "The speed with which we operate our motor cars, and with which we operate our intricate machinery makes life impossible with the liquor traffic. It is found that a single drink unfits a man for driving for as much as four hours. With twenty-three million cars in operation in this country, every man's life would be endangered with liquor being drunk by drivers." If the railroads may forbid its locomotive engineers to drink even when off duty, surely the American people may forbid all automobile drivers to do the same. There is a growing popular realization that science and the arts have not only set a pace for civilization that neither the habitual nor moderate drinker of intoxicants can follow with safety to himself or others, but that they have provided also efficient substitutes for the saloon in the motor car, the radio, the motion pictures, and the absorbing pursuits of industry as revolutionized by modern methods.

A surprising revelation of the book is the colossal failure of the Canadian dispensary system. In every case the consumption of liquor has increased, bootlegging has multiplied so as to equal the dispensary business, and the value of distillery stock has trebled. On the contrary, liquor consumption has diminished in the United States under prohibition.

Perhaps no measure of the value of prohibition can be objectively better than its economic results. Professor Fisher finds that by conservative estimate from all the facts available not less than six billion dollars a year and very likely much more are turned into productive industries which used to be spent for liquor and of no economic value.

Prohibition is admittedly not out of its worst period. Present conditions of law enforcement under national prohibition must be corrected, although conditions are not as bad as they have been represented. Prohibition has already accomplished incalculable good, hygienically, economically, socially. Real personal liberty has been increased under prohibition. Repeal of the eighteenth amendment is impossible. Hence, the only satisfactory solution lies in fuller enforcement. In the words of President Hoover: "Our country has deliberately undertaken a great social and economic experiment, noble in motive and far-reaching in purpose. It must be worked out constructively."

GEORGE S. PAINTER,
New York State College

CAN THE WAGES OF A STATE INSTITUTION EMPLOYEE
BE CONTINUED WHILE HE IS ABSENT ON JURY DUTY?

Opinion of Attorney-General Ward

The following is an opinion by Attorney-General Ward of New York State relating to the payment of wages to employees while on jury duty:

*To Hon. Frederick W. Parsons, M. D.,
Commissioner of Mental Hygiene:*

You call my attention to opinion of this office dated November 12, 1913, and shown in Report of the Attorney General for 1913 at page 655.

Concluding your letter you state:

“The specific inquiry is: Have I, as Commissioner, discretionary power upon the recommendation of the Superintendent of a State institution to continue the wages or salary of a State institution employee while he is absent from the service performing jury duty?”

I have considered the opinion of this office with respect to the payment of the salaries of employees of State hospitals while absent on jury duty, to which you referred.

The language of the head note of such opinion, because of its brevity, is a little misleading and perhaps, too, all inclusive.

A reading of the opinion itself, which was quite short and rather informal, would indicate that the holding was really to the effect that, if the jury duty was performed voluntarily by not claiming the exemption in favor of certain resident officers and employees of “a State asylum for lunatics, idiots or habitual drunkards” as provided in paragraph 2 of Sec. 546 of the Judiciary Law, no specific provision of law was found to authorize the payment of the salary of the employee during the period he was on jury duty.

The opinion was negative rather than positive. It did not point out any provision of law prohibiting the payment of the salary of such employee and I am unable to find any such prohibitive provision.

The above mentioned opinion should be read in conjunction with the opinion of the same Attorney-General dated May 5, 1913, shown in report of the Attorney-General for 1913, at page 337, copy of which I am enclosing for your information and files.

This latter opinion held that a State asylum employee is *entitled to exemption* from jury duty *upon claiming* such exemption *and obtaining* it as required by the Judiciary Law.

I do not understand it is mandatory that he seek the exemption. If the special exemption authorized and permitted by the Judiciary Law is not claimed and granted, as provided by law, then the employee is required to serve as a juror and having so served I do not believe there is any justification in denying him his State compensation. Neither do I find any specific provision of law prohibiting the payment of the employee's salary or any statute from which such prohibition may be reasonably inferred.

As already stated, it does not appear that the employee is compelled to claim the exemption. It is in the nature of a special privilege of which he may avail himself, if he so desires or is directed to do so by his superiors.

But, in order to take advantage of the privilege, several things are necessary to be done not only by the employee but also by the superintendent of the institution, as set forth in the Judiciary Law and summarized in the first paragraph of the opinion of May 5, 1913.

There have been no amendments to the Judiciary Law since the opinion of November 12, 1913, but as you state "there has been a marked change in the general attitude toward those rendering jury duty and a greater tendency to criticise those who by subterfuge or otherwise, seek to evade this form of public service." I agree with your further statement that you "believe that the State as a model employer ought to set an example for private employers."

If the right to exemption is not claimed and granted, the employee can be compelled to serve and having so served, should not and I believe cannot be deprived of his regular salary. He must obey the order summoning him as a juror or be subject to punishment for failure to obey.

It has been practically the universal practice of all State depart-

ments for many years to pay the salaries of employees while they were absent because of jury duty and I see no reason and know of no law which would require your department to adopt any other practice.

If the employee has actually served as a juror, thus performing a very important public duty, he should not be prejudiced by the loss of his regular salary.

There are many situations where a State employee may be paid his salary although absent from his duties, such as where he is on a leave of absence with pay because of sickness or other unusual reasons or where he is subpoenaed as a witness and receives his witness fees and other allowances.

If your department is desirous of having the officials and employees of the institutions under your jurisdiction relieved from jury duty, the procedure outlined in the second paragraph of the opinion dated May 5, 1913, should be adopted and followed.

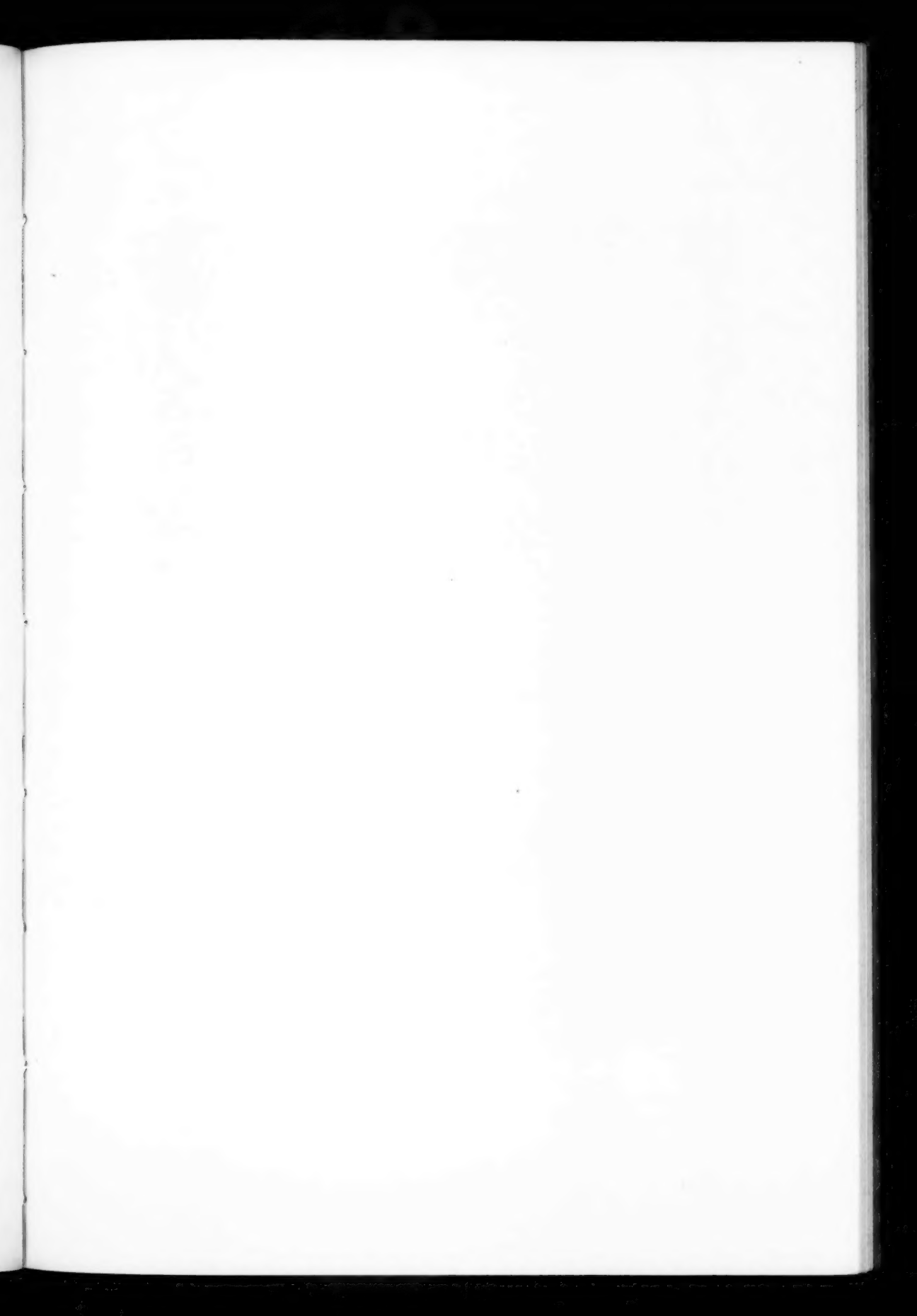
The opinion of this office dated November 12, 1913, and referred to in your letter may be considered as modified as herein indicated and I answer your inquiry in the affirmative and advise you may continue the wages or salary of an officer or employee of a State institution under your jurisdiction while he is absent from service while performing jury duty.

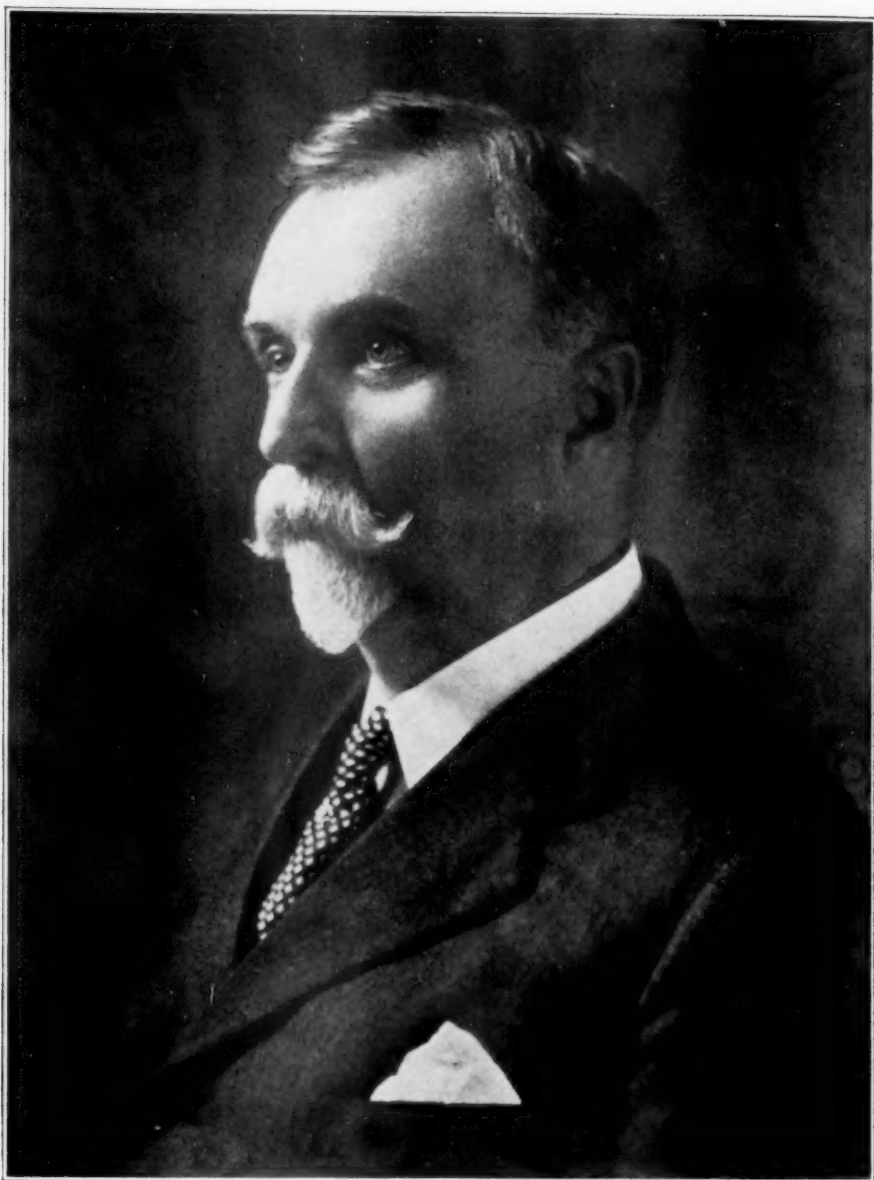
Very truly yours,

HAMILTON WARD,
Attorney-General.

By

P. H. CLUNE,
Deputy Assistant Attorney-General.





CHARLES W. PILGRIM, M. D.

DR. PILGRIM HONORED

Pilgrim State Hospital is the name which has been given by legislative enactment "in recognition of the devotion of Charles Winfield Pilgrim for the care of the insane in New York State", to the new State hospital for the care of the insane, under construction in Suffolk County, Long Island.

Governor Franklin D. Roosevelt on April 10 signed the bill establishing and naming the new hospital which passed the Legislature during the closing days of the last session. The bill was introduced in the Assembly by Assemblyman Hamilton F. Potter of Suffolk County at the request of Dr. Frederick W. Parsons, Commissioner of Mental Hygiene. A similar bill was introduced in the Senate by Senator George F. Thompson of Kings Park. Dr. Pilgrim was present at the signing of the bill, by special invitation of the Governor, who made the doctor very happy by giving him the pen with which the executive's signature was affixed.

The suggestion that this honor be bestowed upon Dr. Pilgrim was made originally by former Governor Alfred E. Smith, and later endorsed by Governor Roosevelt. Legislative leaders also consented to the proposal when Commissioner Parsons consulted with them preparatory to the introduction of the bills in the Legislature.

"For fifty years," Commissioner Parsons said when the bills were introduced in the Legislature, "Dr. Pilgrim devoted all his efforts to the care of the insane in New York State and is in a large measure responsible for the high standard prevailing in this State. He was ever alert to the pathos of human suffering and was by his knowledge, his vision, his culture and his gentleness an inspiration to the entire State Hospital Service. That two Governors and the legislative leaders now wish to honor him by using his name in connection with what will be one of the State's great hospitals is a source of much satisfaction to Dr. Pilgrim's many friends."

Dr. Pilgrim retired from the State Hospital Service in December, 1921, and has since conducted a private institution for mental disease at Central Valley, New York.

LEGISLATIVE MATTERS ARISING DURING THE 1929 SESSION, OF INTEREST TO THE NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE*

BY LEWIS M. FARRINGTON,
SECRETARY, DEPARTMENT OF MENTAL HYGIENE

During the legislative session there were introduced in the Senate 1,594 bills and in the Assembly 1,823—a total of 3,417. Of course many of these are duplicates, having been introduced in both houses. In this proposed legislation there are upwards of one hundred bills in which the department is interested in varying degree, and it is my task this morning to summarize for you briefly some of the outstanding features. We have endeavored this year to send to all superintendents, bills as introduced in which the Department is especially interested. We have also sent to individual superintendents, bills which might be of local interest.

The situation regarding the appropriation bills is well understood and the only comment necessary is that the bills which provide for maintenance, and construction at the hospitals will be included in the so-called 30-day bills left for the Governor's consideration at the close of the legislative session.

To save time I have endeavored to group the proposed legislation under several headings, pointing out the outstanding features in each group. Obviously, many of the bills may properly be classed under more than one of the listed groups, but to save time and space I have limited comments on such measures to the group under which they have at times been somewhat arbitrarily included. The group headings themselves are selected solely from the viewpoint of interest to the Department.

DEPARTMENT LEGISLATION

Under this heading I have placed bills prepared or sponsored by the Department. None of these bills is of major importance, one of the most interesting being the revision of the Craig Colony law to correlate it with the Mental Hygiene Law. In this the Commissioner has had the cooperation of Doctor Shanahan and the advice of others especially interested. This bill is now Chapter 550.

* Address at Quarterly Conference at Albany, March 22, 1929, and later amplified.

Another bill makes provision for admission of mental defectives on physician's certificate or voluntary application similar to the arrangements for insane patients. This bill is now Chapter 172.

Another Department bill revises sub-division 7 of Section 2 of the Mental Hygiene Law, defining residence by adding the word, "continuously". This bill became Chapter 63.

A bill authorizing the Commissioner to acquire land for sewers and sewage disposal plants by entry and appropriation, has become Chapter 135.

A bill authorizing an organization acting on behalf of the United States Naval Academy at Annapolis to erect a boat house on the grounds of the Hudson River State Hospital, has become Chapter 8.

A bill authorizing the Commissioner to enter into a contract with the Hackensack Water Company to dispose of questions relating to water supplies and sewage disposal system of the Rockland State Hospital, has become Chapter 133.

Bills designating the new State hospital on Long Island as the Pilgrim State Hospital in recognition of the devotion of Dr. Charles Winfield Pilgrim to the care of the insane, have been sponsored by the Department and are now Chapters 456 and 549.

RETIREMENT AND PENSION LAWS

A number of bills have been introduced, the general tendency being to liberalize the State Employees' Retirement System in matters of age, period of service, etc. Most of these made but little progress. One which passed the Assembly, would permit payment of pension allowance to the widow of a deceased employee. Another, which passed the Senate, would permit participants in the State Hospital System to transfer to the State Employees' System during the current calendar year.

Two of these bills have been signed by the Governor. One makes a number of minor amendments to the "State-Wide System"; the most important relates to credit for prior service for superannuation purposes only. The other contains the above mentioned revision but omits most of the others. It does, however, provide that employees of the State Institution at Napanoch, who were covered by the Prison Retirement Law on July 1, 1921, and who have

remained in the service, shall again be covered by that law. (Chapters 421 and 422.)

CIVIL SERVICE LAWS

It should be understood that proposed pension legislation is almost entirely a revision of the Civil Service Law. Consequently under this heading I have included only the bills which relate to appointments, removals and continuance of service. The outstanding feature is the effort to provide all sorts of preferential treatment for World War Veterans.

One of these bills vetoed by the Governor, gives credit for military service in all positions for judicial appointment or office. This bill had several revisions. In its original form military service could have been offered for required training or experience for practically any technical position in the civil service. The proposed constitutional amendment extending civil service preferences now granted Civil War veterans, to the veterans of the World War, passed both houses and was sent to the Secretary of State. This must be passed by another Legislature before being submitted to the voters. One bill which passed both houses, would give the veterans of the Spanish and Philippine and World Wars the same preferences as Civil War veterans regarding removal, writ of mandamus and salary paid during suspension. Chapter 511.

Two bills included in this group have been before previous legislatures and both are objectionable. One bill limits the powers of the head of the Department or institution by requiring him to refer to a Personnel Board all charges of inefficiency, dereliction of duty or misconduct in the performance of duty for hearing and determination. If the charges are sustained, the head of the Department may determine the penalty to be imposed. This bill is sponsored by the State Civil Service Employees' Association. The bill failed of passage. Another objectionable bill which has passed the Assembly, provides that (I shall quote the revision in full) "no person shall hereafter receive any appointment in the competitive or non-competitive class of the classified Civil Service of the State * * *, unless he shall at such time be a citizen of the United States, provided that the State * * * Civil Service Commission shall certify

that a citizen of the United States is eligible for such appointment." I do not attempt to interpret this language, but suggest that it may hamper the employment of aliens as attendants, pupil nurses, medical internes, etc. The Commissioner vigorously opposed the bill, but it passed both houses. It was later vetoed by the Governor.

LABOR LAWS

The outstanding feature in this group is the number of bills introduced in which effort is made to include mental diseases, mostly by indirection, in the occupational diseases covered by the Workmen's Compensation Law. All of these bills failed of passage.

It is of interest to note that a bill including radium and X-ray damage in the occupational diseases covered by the Workmen's Compensation Law, has become Chapter 64.

The bill which has been before the Legislature a number of times in recent years, amending the Labor Law by requiring one day of rest in seven and the posting of a special schedule of employees permitted to work on Sundays, was again introduced. While the Commissioner favored the principle behind the bill, he is opposed to the bill in the form in which it was introduced. A public hearing was held at which I represented the Department and pointed out the Commissioner's views as to the need of minor amendments to meet our special conditions. It developed at the hearing that the bill, which is sponsored by organized labor, is not aimed at the Department of Mental Hygiene, but is principally intended to apply to a large group of per diem employees, especially in the larger cities and in a few of the State departments. Later in conference with the legislative agent of the labor organizations, I was assured that the amendments proposed by the Commissioner would not be opposed in case the bill were reported favorably. The bill failed of passage.

One other objectionable bill which failed of passage, provided that the industrial commissioner shall have power of final approval on plans for steam generating and operating plants in the State. The Commissioner opposed this insofar as it would apply to State institutions in the Department.

CORRECTIONS; PENAL LAWS

The outstanding feature in this group is an endeavor to have all persons charged with crime subjected to a psychiatric examination by qualified experts. One plan creates a subdivision in the Department of Mental Hygiene under an assistant commissioner who shall arrange for such examination. This bill made no progress.

Another series of bills provided for mental clinics at Sing Sing Prison (Chapter 242); the Court of General Sessions, New York City; and the Kings County Court. These last two were vetoed.

Another series of bills deal with those under criminal charges, who plead or appear insane and provide for setting up a list of certified psychiatrists. Only those physicians whose names appear on this list may examine those charged with crime, and testify in criminal cases. These bills failed of passage.

Another bill provides for a third assistant commissioner in the Department of Correction, who shall be a qualified psychiatrist of not less than five years' experience. This bill failed of passage. Other bills proposed amendments to the Code of Criminal Procedure by setting forth the procedure for examination when a person confined pleads or appears insane. This bill failed of passage. The net result, therefore, in this group is the establishment of a psychiatric clinic at Sing Sing.

POOR AND CHARITIES LAWS

The outstanding feature under this heading is a general revision of the poor laws which is set up in a new statute known as the Public Welfare Law. The Commissioner secured the inclusion of several minor amendments in this bill to make it conform to the Mental Hygiene Law. The bill is now Chapter 565.

EXAMINATIONS, COMMITMENTS, ETC.

The most outstanding feature under this heading is the bill providing for the establishment of a list of certified psychiatrists who only may examine persons charged with crime and give expert testimony in court. This list is to be established by a Board of Psychiatric Examiners in the Department of Mental Hygiene, which board is to consist of the Commissioner of Mental Hygiene, who shall be

chairman, the Commissioner of Education and the Commissioner of Health. This provides, however, that the functions of this board shall be deemed the functions of the three departments represented by its members.

The board is required to determine the qualifications of psychiatrists and to establish a list which shall be published annually. The minimum requirements are that the physician shall be duly licensed to practice in the State, to have had at least five years' actual practice and to have had either three years' experience since July 1, 1915, in the care and treatment of insane persons in an institution for not less than fifty patients, or that he has devoted five years immediately prior to his application in private practice confined wholly or substantially to the care and treatment of persons suffering from nervous and mental diseases. This bill is a companion bill to those amending the Code of Criminal Procedure already mentioned. The bill failed of passage.

Another bill prescribes that the fees of commissioners in lunacy shall be fixed by the court instead of prescribed by rule as is the case at present. This bill failed of passage.

The bill requiring the assignment of counsel in proceedings brought for the commitment of insane persons, made its annual appearance, but failed to make progress.

A bill amending the Civil Practice Act in the matter of petitioning for a writ of habeas corpus, would require that the application must state whether any previous application for a writ has been made and, if so, to what court or judge, whether any appeal has been taken from the order, what new facts, if any, are shown on subsequent application. Failure so to do may vacate the writ. The bill also struck out the provision that the judge forfeit one thousand dollars for refusal of a writ. The bill passed the Senate, but failed in the Assembly.

The Mental Hygiene Law has been amended by Chapter 427 to provide in Greater New York for commitments of insane persons to be handled by the Commissioner of Hospitals who has succeeded to the powers and duties of the Department of Public Welfare and the trustees of Bellevue and allied hospitals.

MENTAL AND SOCIAL HYGIENE; DOMESTIC RELATIONS

The outstanding feature of the bills grouped under this heading is the evident interest in the subject of old age pensions. At least five bills have been introduced, ranging in provisions from establishing a temporary fact-finding commission to elaborate set-ups with large appropriations to carry out this work. The Legislature finally passed a measure creating a temporary commission to investigate the situation so as to ascertain the most practical and efficient method of providing security against old age want. The bill carried an appropriation of \$25,000, and is now Chapter 664.

The most radical bill in this group is that providing for sexual sterilization of certain insane, idiotic, imbecile, epileptic and feeble-minded inmates of institutions supported wholly or in part by public funds, under rigidly prescribed conditions and with full legal safeguards. A public hearing was held and the joint legislative welfare committee appointed to investigate public charitable institutions, endorsed the bill. The bill failed of passage.

A bill including insanity among the grounds for absolute divorce, was introduced. The term "insanity" is not defined. The bill made no progress.

An amendment to the law providing for annulment of marriage after five years of insanity and intended to eliminate some of the objections of hospital superintendents under the present law, was introduced. This bill is now Chapter 537.

Another group of bills, three in number, provide for child welfare allowances in specified conditions of mental disease or hospital residence of child or mother. The only bill in this group that passed, provides that such welfare allowances may be paid for a tubercular husband. This bill is now Chapter 347.

CLAIMS

With a few exceptions the claim bills of interest to the Department have been before previous Legislatures. One exception is the bill which would permit the examining physicians in the case of the Brush sisters, former Kings Park patients, to file a claim for their expenses in the several trials of this celebrated case. (Vetoed.)

One bill would permit the filing of a claim for alleged injuries

sustained by a visitor attending an entertainment at the Willard State Hospital. (Chapter 496.)

Another bill claims damage on account of alleged contamination from the sewage disposal plant at Craig Colony. (Chapter 508.)

Another bill claims damage because of an unexercised real estate option at Marcy about seventeen years ago. This bill is the most hardy perennial in the collection. The original claimant has been dead at least ten years. Yet, with but one or two exceptions, the bill has been before every Legislature since 1913, has passed a number of times and has uniformly been vetoed. (Also vetoed this year.)

Two bills claim damages on account of deaths of patients at Brooklyn State Hospital (Chapters 489 and 490) and still another claims damages because of injuries sustained by a patient at Danemora State Hospital. (Chapter 506.)

It is of interest to note that a bill abolishing the necessity for special claim bills was passed. It is stated that if the Governor approves this bill, it will be possible to bring these irregular cases before the Court of Claims without special legislation. (Chapter 467.)

MISCELLANEOUS BILLS OF SPECIAL INTEREST

The outstanding feature in the bills I have included in this group is the number of bills providing for stricter supervision of the acts and accountings of committees of patients. At least eight bills have been introduced and four of these passed. One requires a committee to be appointed to sell real estate belonging to an incompetent because of imbecility, old age, etc., the same as is now required for such sale of property belonging to an insane person. (Chapter 335.) Another bill gives the court greater latitude in the matter of the security to be required of the committee. (Chapter 338.) An important bill relates to the guardianship of incompetent veterans and infant wards of the United States Veterans' Bureau. This bill is in the form recommended by the Conference of Commissioners on Uniform State Laws. The bill harmonizes Federal law and the rules of the United States Veterans' Bureau and the New York State Law relating to guardians and committees. (Chapter 340.)

Another important bill makes several amendments regarding the

examination of accounts of committees, particularly in Greater New York, although the bill is of State-wide application. (Chapter 670.)

A number of bills included in this group are of special interest to certain institutions. One of these, now Chapter 118, appropriates \$125,000 for a new assembly hall at Kings Park. Another bill appropriates \$150,000 for a sewage disposal plant at the Rome State School. This is now Chapter 392.

A bill providing for a tri-borough bridge in Greater New York and encroaching further on Ward's Island by taking a strip of land, which incidentally destroys several buildings now occupied by patients, has been passed and is now Chapter 379.

A bill permitting the exchange of the Lake Farm at Rochester for other land in the discretion of the Commission, is now Chapter 182.

A bill authorizing the sale of a gravel pit owned by the Willard State Hospital was vetoed by the Governor.

A bill permitting the exchange of land at Creedmoor in the discretion of the Commissioner, was withdrawn.

A bill authorizing the Commissioner to release to Syracuse for park purposes a certain tract of land now part of the grounds of the Syracuse State School, passed both houses and is now Chapter 621.

The bill appropriating the year's allotments, which became Chapter 93, from the One Hundred Million Dollar Bond Issue, contains two items of interest to the Department. These are as follows: Rochester State Hospital power house, \$850,000; Letchworth Village, continuing development and construction, \$250,000.

MISCELLANEOUS BILLS OF INCIDENTAL INTEREST

Two bills establishing welfare foundations with broad powers have been passed and approved by the Governor.

The Kress Foundation is to promote the moral, physical and mental well-being and progress of the human race.

The Heckscher Foundation is to promote the welfare of the children of the U. S. A.

Several bills designed to curb ambulance chasing lawyers have been killed in committee, but a companion bill prohibiting physicians of hospitals from advising patients to hire a lawyer to press

a damage claim, was reported in the Assembly, but failed of final passage.

An interesting bill requires Boards of Education to establish special classes for ten or more mentally retarded children, striking out the existing limitation that such mental retardation shall be three years or more. This bill is now Chapter 258.

A bill requiring that a subpoena for hospital records must be served at least twenty-four hours in advance of the time fixed for the production of such records, is now Chapter 339.

A bill abolishing daylight saving in all State departments and institutions was killed on the floor of the Assembly.

A bill extending the time alien physicians may practice medicine in the State, from six to ten years, is now Chapter 263.

From the above summary you will see that while there has been no legislation passed of outstanding importance to the Department, much of interest has been proposed and a considerable amount of worthwhile legislation received executive approval. Furthermore, proposed legislation objectionable to the Department in most instances, made little or no progress.

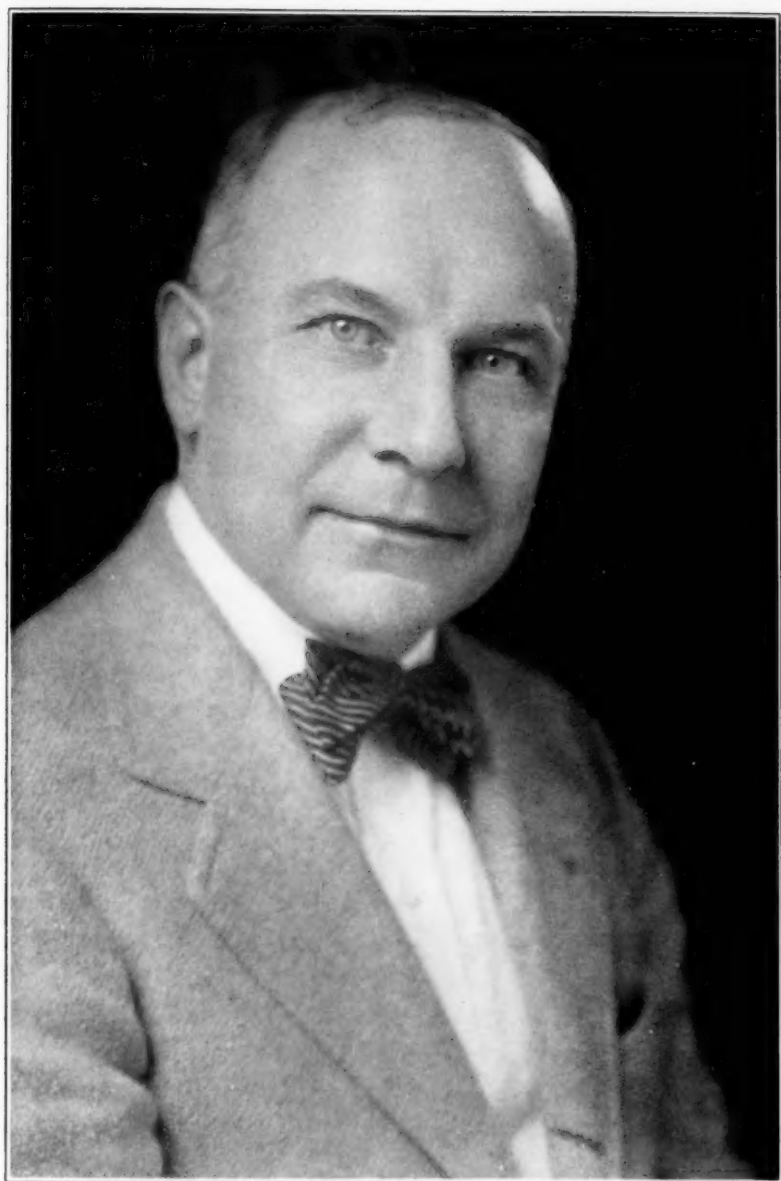
APPOINTMENT OF DR. STECKEL AS SUPERINTENDENT OF THE NEWARK STATE SCHOOL

Dr. Harry A. Steckel, director of clinical psychiatry of Binghamton State Hospital, was appointed by Commissioner Parsons superintendent of Newark State School, April 1, 1929. The position was made vacant by the death of Superintendent Ethan A. Nevin which occurred October 10, 1928.

Dr. Steckel was born in Catatsauqua, Pa., December 13, 1886. His early education was obtained in the Allentown public schools. He attended the College of Liberal Arts of the University of Pennsylvania for one year and then entered the medical school of the same institution. He graduated therefrom with the degree of Doctor of Medicine in 1910. He served as medical interne in St. Francis General Hospital of Trenton, N. J., from August, 1910 to August, 1911. He then became a member of the staff of the New Jersey State Hospital at Trenton, and after serving a few months, accepted a position in Mount Pleasant State Hospital of Iowa. He entered the New York State hospital service as medical interne in Kings Park State Hospital in September, 1912; he was promoted to assistant physician in February, 1914, and to senior assistant physician in June, 1918.

Dr. Steckel served in the Medical Corps of the United States Army from June 14, 1917 to April 29, 1919, 20 months of this time being spent in France. Entering the service as a first lieutenant, he was promoted to captain in September, 1918. After discharge from the army he was commissioned major in the Medical Reserve Corps in July, 1919, and was promoted to lieutenant-colonel in November, 1924.

When in France, he was first detailed to the American Red Cross for six months. During that period he assisted in the organization of the American medical service for civil population under the direction of Dr. Hugh H. Young of Baltimore; he also took a special course in neuro-syphilis at the Hôpital Broca in Paris,



DR. HARRY A. STECKEL



France. In February, 1928, he was assigned to the 26th "Yankee Division", opening the first neuropsychiatric ward for American troops in France, under direction of Dr. Thomas W. Salmon, who was at that time consultant in neuropsychiatry for the A. E. F. He served as assistant to the division psychiatrist for five months and as division psychiatrist for the 26th Division from June, 1918, to April 29, 1919.

Returning from France in the spring of 1919, Dr. Steckel re-entered the State service as senior assistant physician at Kings Park State Hospital and for approximately five years was in charge of the social service department of that institution.

In the fall of 1922, he assisted in the survey of jail and prison population of New York State under the auspices of the National Committee for Mental Hygiene; and in 1923, directed a survey from the psychiatric viewpoint of the clients of the New York Association for Improving Conditions of the Poor, also under the auspices of the National Committee for Mental Hygiene.

In September, 1924, he was transferred to the Binghamton State Hospital, and in October, 1925, was promoted to the position of director of clinical psychiatry. During his service at Binghamton, he was active in the educational program along mental hygiene lines carried on by the hospital.

In 1926, he was appointed to the faculty of Elmira College as lecturer in mental hygiene. At this college he is also a member of the Personnel Committee which assists in adjusting students and in giving them vocational guidance.

Dr. Steckel is a member of the National Committee for Mental Hygiene; the New York State Medical Society; the American Psychiatric Association; the American Orthopsychiatric Association; the Reserve Officers' Association of the United States; and the Association of Military Surgeons of the United States.

Articles published by Dr. Steckel include the following:

"Two Cases of Dementia Præcox with Sexual Traumatism as an Etiological Factor."

“War Neuroses in the Combat Areas.”

“The Social Service Department and Its Rôle in an Extensive Parole System.”

“Correcting Human Maladjustments.”

“Educational Work of the State Hospital.”

“Outline of a Comprehensive Course in Mental Hygiene.”

“The Need for Sheltered Workshops in the Rehabilitation of Mental Cases.”

Dr. Steckel married Carolyn E. Moon, of Binghamton, on September 29, 1919, at Lake Mohonk, N. Y. They have two children, Elizabeth Ann, 7½ years of age, and William H., 2½ years.

THOMAS WILLIAM SALMON MEMORIAL, INC.

The memory of the late Dr. Thomas W. Salmon is to be perpetuated by the Thomas William Salmon Memorial, Inc. An organization meeting of the Board of Trustees of the Memorial was held in the Hotel Pennsylvania, New York City, on February 5, 1929. The following officers were elected:

Honorary Chairman: Hon. George W. Wickersham.

Chairman: Frankwood E. Williams, M. D.

Vice-Chairman: William L. Russell, M. D.

Honorary Vice-Chairmen: Dr. Nicholas Murray Butler, Hon. John H. Finley, Rev. Harry Emerson Fosdick, Mrs. Helen Hartley Jenkins, General John J. Pershing, Mrs. William K. Vanderbilt.

Secretary: Austin Fox Riggs, M. D.

Assistant Secretary: Paul O. Komora.

Treasurer: New York Trust Company.

Assistant Treasurer: Samuel W. Hamilton, M. D.

The plans of the committee call for the raising of an endowment fund amounting to a minimum of \$100,000. The income is to be used in establishing an annual lecture or series of lectures to be given under the auspices of the New York Academy of Medicine in New York or elsewhere, and to be regularly published in book form as a permanent part of the Memorial. If the income of the fund exceeds the amount needed for the annual lectureship, provision is to be made for the application of the excess to further researches and investigations that may contribute to the advancement of psychiatry and mental hygiene.

The office of the Memorial has been established in the Penn Terminal Building, 370 Seventh Avenue, New York City.

SIXTH ANNUAL INSTITUTE OF CHIEF OCCUPATIONAL THERAPISTS

The Sixth Annual Institute of Chief Occupational Therapists of the Department of Mental Hygiene was held in New York City, February 25-28, 1929. The program of the Institute had been arranged by Mrs. Eleanor C. Slagle, director of the bureau of occupational therapy, and she presided at the various sessions. The first session was held at the Russell Sage Foundation Building at 10 a. m., February 25. Papers were presented as follows:

"Application of Mental Hygiene to Daily Life," by Dr. George K. Pratt, assistant director, National Committee for Mental Hygiene.

"Social Aspects of Mental Hygiene," by Dr. Stanley P. Davies, assistant secretary, State Charities Aid Association.

"The Importance of Refresher Work for Individual and Professional Advancement," by Mr. Thomas B. Kidner, New York City.

"The Need of Sheltered Workshops in Community Rehabilitation of Mental Patients," by Dr. Harry A. Steckel, director of clinical psychiatry, Binghamton State Hospital.

Brief addresses were made by Dr. George W. Mills, superintendent, Brooklyn State Hospital; Dr. Charles Bernstein, superintendent, Rome State School; Professor Sprigg of the Education Department of New York University; Dr. William R. Dunton of Maryland, and Dr. Philip Smith, medical inspector of the Department of Mental Hygiene.

The afternoon session was devoted to craft demonstrations and instruction by therapists and other topics relating to the technical problems of those engaged in hospital work. A large number of the members of the Institute took part in the program of this session.

On February 26, the members of the Institute visited Letchworth Village and were guests of Dr. Charles S. Little, superintendent of the institution. On arrival at the institution the members visited the schools and manual activities and were then entertained at luncheon. In the afternoon a session of the Institute was held at which Dr. Harry C. Storrs, first assistant physician, conducted a

clinic demonstrating various types of mental defectives, and Dr. George J. Veith, first assistant physician, gave an address relative to the use of manual training in the education of mental defectives.

On February 27, the members spent the day at the Metropolitan Museum of Art. They were welcomed by Mr. Elliott, director of the educational department of the Museum, and an address on the "Relation of the Museum to the Designer" was given by Miss Ethelwyn Bradish, instructor in the educational department. The lecture was illustrated by lantern slides and was of unusual interest to the members. Following the lecture, a visit to the galleries was made under the direction of Miss Bradish.

Permits having been obtained, members of the Institute spent the afternoon in the Museum making sketches and notes of designs adaptable to the work of their department.

The final session of the Institute was held on the morning of February 28, at the Flatiron Building in New York City. The session was devoted to a discussion of questions and problems relative to uniforms and to exhibits at the State Fair and at the annual meeting of the American Occupational Therapy Association. Samples of uniforms were presented by Mr. Hochhauser, president of the Altro Workshops, and a new type of weaving for bags was demonstrated by Miss Edith Snow of the Snow Studios.

Papers presented at the Institute by Mr. Kidner and by Drs. Steckel and Veith will be published in *THE PSYCHIATRIC QUARTERLY* for July, 1929.

NOTES

—The new United States Veterans' Hospital at Portland, Oregon, was formally opened March 18, 1929.

—Dr. Michael M. Davis, long known for his activities in the field of public health especially in the development and standardization of dispensaries, has been chosen director for medical service of the Julius Rosenwald Fund.

—Dr. Franklin W. Barrows for the past ten years assistant medical inspector in the New York State Department of Education has resigned to accept a position as medical health supervisor in the school system of New Rochelle, N. Y.

—The New York City Committee on Mental Hygiene cooperating with the Board of Education, has arranged a short course on mental hygiene in the teachers' training schools in New York City for the spring semester. The course is an outgrowth of previous units of a similar kind in the normal schools throughout the State.

—The Albany County Committee on Mental Hygiene has conducted a successful series of four lectures on mental hygiene. The course addressed by prominent speakers aroused much interest among teachers, parents and social workers. Miss Katherine G. Ecob has made for the Albany committee a survey of mental hygiene facilities in the county.

—Dr. Stewart B. Sniffen of White Plains, son of Dr. D. Austin Sniffen, has been appointed psychiatrist of the Mental Hygiene Society of Maryland. He is an alumnus of Rutgers College and took his science and medical degrees at Columbia University. At one time he was assistant physician at Bloomingdale Hospital.

—Walter Nelson Thayer, 81, former warden of Clinton Prison and the first warden of the Great Meadows Prison at Comstock, died March 19, 1928, at his home in Brooklyn. He was the father of Dr. Walter Nelson Thayer, Jr., medical superintendent of the Institution for Defective Delinquents at Napanoch.

—Dr. Virginia Wilson, a well-trained psychiatrist and psychologist, has recently been appointed medical director of the public schools in Utica. This appointment is considered exceptionally fitting as it will assure to the children of Utica consideration of their mental as well as their physical well-being.

—With the assistance of the Commonwealth Fund a traveling mental hygiene clinic has been organized in Virginia. The clinic staff will consist of a psychiatrist, a psychologist, and two psychiatric social workers. The clinic is to serve the schools and medical and social agencies throughout the state and to examine and treat problem children.

—Governor Roosevelt, in February, appointed a committee of his cabinet to study the subject of sewage disposal as it relates to State institutions. The committee comprises Dr. Matthias Nicoll, Jr., commissioner of health; Dr. Frederick W. Parsons, commissioner of mental hygiene; Dr. Raymond F. C. Kieb, commissioner of correction; Dr. Charles S. Johnson, director of charities, and Col. Frederick Stuart Green, commissioner of public works.

—Dr. William A. Howe, chief of the bureau of medical inspection in the State Education Department, and formerly deputy commissioner of health from 1910 to 1913, has been awarded a Ling Medal for his work in the promotion of child health. The medal will probably be presented to Dr. Howe at the next meeting of the American Association of School Physicians to be held in Minneapolis.

—A course of lectures on mental hygiene arranged by the Mental Hygiene Lecture Committee, representing the Cooperative Committee of Big Sisters, the New York Neurological Institute and the New York City Committee on Mental Hygiene of the State Charities Aid Association, was successfully opened on January 17, 1929, at the Y. W. C. A. Auditorium, 610 Lexington Avenue, New York City. The series will consist of ten lectures, five each by Dr. Abraham Meyerson and Dr. Edward A. Strecker.

—Dr. George M. Kline, Commissioner of the Department of Mental Diseases of Massachusetts, has been awarded the Cross of the Knight of the Legion of Honor of France in recognition of his services and those of his department to the Province of Quebec, Canada. Graduates of the University of Montreal have been sent to Massachusetts institutions for training in psychiatry and mental hygiene, and hospital officials from Quebec have from time to time visited these institutions and studied the methods of the department.

—The eighty-fifth annual meeting of the American Psychiatric Association will be held in Atlanta, Georgia, from May 13 to May 17 inclusive. The sessions will be held in the Atlanta Biltmore Hotel. Sections will be devoted to convulsive disorders, administration and clinical psychiatry, psychoanalysis, and psychopathology. The officers of the association are: Dr. Samuel T. Orton, president; Dr. Earl D. Bond, vice-president; Dr. Robert L. Dixon, honorary vice-president; Dr. Clarence O. Cheney, secretary-treasurer.

—Psychiatrists interested in literature dealing with the social aspects of mental disease will find a handy reference and adequate summaries in a new journal known as "Social Science Abstracts", described as a comprehensive abstracting and indexing journal of the World's Periodical Literature in the Social Sciences. It is published under the auspices of the Social Science Research Council with editorial offices in Columbia University, New York City.

—The monthly bulletin of the Massachusetts Society for Mental Hygiene describes an interesting experiment conducted by Dr. William A. Bryan, superintendent of the Worcester State Hospital, which consists in holding monthly meetings with relatives of patients. The programs are made as practical as possible, and relate to such subjects as the place of the hospital for mental diseases in the community, the purpose of hospital social service, of occupational therapy and hydrotherapy. Dr. Bryan finds these meetings helpful to both the community and the hospital.

—The New York State Committee on Mental Hygiene arranged a dinner at the Gramercy Park Hotel in New York City on February 21 for the directors and secretaries of State mental hygiene societies. Executives of ten State societies and representatives of the National Committee for Mental Hygiene were present. The addresses dealt such varied subjects as "Mental Hygiene Development at Yale", "Cooperation with Social Agencies", "Relations with County Medical Societies" and "Mental Hygiene in Industry."

—The Teachers' Union Auxiliary of New York is sponsoring a course for teachers on "Understanding the Child in the Class Room". Dr. George K. Pratt, assistant medical director of the National Committee for Mental Hygiene opened the course with a lecture on February 18. Discussion forums led by Dr. Pratt and Mr. E. K. Wickman of the Institute for Child Guidance are being held on successive Mondays. The response has been enthusiastic, more than 100 teachers registering for the course and taking part in the discussion.

—Institutes for the study of humanity grow in increasing numbers. The most recent is an Institute of Human Relations at Yale University with an endowment fund of about \$7,000,000 created by grants from the Rockefeller Foundation, the Laura Spelman Rockefeller Memorial, and the Commonwealth Fund. The Institute is to be a center for graduate and research work. Its purpose is to coordinate the activities of psychologists, biologists, sociologists and psychiatrists in the study of the relations of law, medicine and psychiatry to human behavior.

—Governor Roosevelt on March 26, 1929, sent a special message to the Legislature recommending the immediate passage of a bill submitting the proposal of a bond issue of fifty million dollars to be used for the construction of State hospital and charitable institutions for the care of the wards of the State. He called attention to the rapid increase of patients and the serious overcrowding which continues in spite of the large additions recently made to the State hospital system.

The Governor also made an appeal to the people of the State by broadcasting a message setting forth the principal arguments in favor of the proposed bond issue.

The bill recommended was not passed by the Legislature.

—One of the outstanding anomalies in public health in recent years has been the seeming paradox of an increasing rate of mental disease in contrast to otherwise improved conditions of health. This paradox has been observed in other fields. In an article by R. Broda in *Social Forces* for March, 1929, entitled "Must We Pay for Modern Living with Shortened Life?" the author shows that the corrected death rates for organic diseases of the heart, diabetes and cancer are on the increase. Notwithstanding all the advances of medical science, notwithstanding the greater wealth of the people making possible greater comfort and more care for health, the typical chronic diseases particularly in the later years of life are increasing.

—Commissioner Parsons' recommendation in his annual report to the Legislature for the inauguration by the State of a campaign in mental hygiene, similar to that conducted in the interests of physical health, under the auspices of the State Department of Health, has received much favorable comment in the newspapers of the State. As one editorial writer expresses it, "People are coming to fully realize that prevention is the important study and practice of the day. They have always recognized the wisdom of the adage that an ounce of prevention is worth a pound of cure, but they have been slow in adopting the practice it suggests. The results of the child guidance clinics thus far conducted on a limited scale by the department of mental hygiene, have been salutary and encouraging."

—Dr. William H. Davis, chief statistician for vital statistics, in the Bureau of the Census, died January 8, 1929. Dr. Davis early devoted himself to vital statistics becoming deputy health commissioner and vital statistician of the city of Boston in 1908. He succeeded the late Dr. Cressy L. Wilbur in the Bureau of the Census. Dr. Davis devoted great energy to the task of completing the registration areas for births and deaths the attainment of which is near at hand. He also played an important part

in the scientific classification of diseases for purposes of mortality and morbidity statistics, representing the United States at several international conferences concerned with the standard classification of causes of death. He was the author of the Bureau of the Census Manual of Joint Causes of Death, published in 1925.

—In the monthly bulletin of the Massachusetts Society for Mental Hygiene for January, 1929, Dr. Vernon L. Briggs describes a valuable institution known as the Hopkinton Occupational Therapy Center. The need for a place intermediate between the State institution and the community prior to parole or discharge had long been felt, and more than 20 years ago the State Board of Insanity requested the legislature for funds for such a convalescent home. These efforts failing, private initiative was resorted to resulting in the organization of a home on a farm donated at a nominal rental by Dr. E. C. Noble, assistant superintendent of the Boston State Hospital. Miss Marie L. Donohoe, then head social worker at the Boston State Hospital, organized the occupational center which served as a place where the hospital could send women, no longer benefiting from State hospital treatment but not yet prepared for the demands of society. The present home accommodates ten or eleven patients.

—The first International Congress on Mental Hygiene will meet in Washington, D. C., May 5-10, 1930. It is expected that the following countries will be represented: Africa, Australia, Belgium, Brazil, Bulgaria, Canada, Denmark, Finland, France, Germany, Great Britain, Greece, Holland, Hungary, Italy, Japan, Luxemburg, New Zealand, Norway, Porto Rico, Russia, Spain, Sweden and Switzerland. The chairman of the committee on organization is Dr. Arthur H. Ruggles of Providence, R. I. The vice-chairmen are Dr. Samuel T. Orton, of New York City, and Dr. George E. McPherson, of Belchertown, Mass. Clifford W. Beers, of the National Committee for Mental Hygiene, will be secretary-general of the Congress. Funds to pay the cost of the Congress have been provided through a gift of the American Foundation for Mental Hygiene. It is the purpose of the sponsors of the Congress to invite the participation of all countries and to enlist the cooperation of heads of governments, public officials, as well as private institutions, associations, and individuals.

—The *Medical Sentinel* reports an important contribution by Dr. Arnold H. Kegel, commissioner of health of Chicago, to the reduction of infections following surgical operations. Dr. Kegel had long investigated the subject, beginning with research at the Mayo Brothers' Clinic in Rochester, Minnesota, and continuing after becoming health commissioner of Chicago. He

discovered that wounds washed in hospitals with supposedly sterile water were frequently being washed with infected water. The pollution occurs in the following manner: "When several faucets on the lower floors are opened while water is being turned into sterilizing tanks on the upper floors a vacuum often is created and this draws infected water into the sterile water containers." Changing the plumbing in one hospital resulted in reducing the infections during the following month from 15 per cent of those operated on to none.

Following the announcement of Dr. Kegel's discovery, measures have been taken by several important hospitals to prevent the use of non-sterile water in operating rooms.

—The State of New York is not alone in deploring the effects of the presence of alien insane in the State hospitals. In his annual report for 1927 the medical director of the hospitals for the insane in the Province of Quebec writes as follows: "Two hundred and forty-six foreign-born patients were committed in our hospitals for the insane during 1927, 547 were present at the close of the year. These figures are too high. The Province of Quebec does not receive as many immigrants as the other provinces, therefore, it is easy to conclude that among those who come here, too many are undesirables. These undesirables who were unable to adapt themselves to the local conditions of their respective countries are not in a position to adapt themselves to the conditions of their adopted country and finally they had to be admitted in our hospitals for the insane. Thanks to the new system which has just been established by the Federal Government by which Canadian physicians examine in Europe persons who wish to migrate to Canada, we shall have a better class of immigrants from Europe and the result will be that we shall receive a smaller number in our institutions."

—Dr. Fernand Widai, a distinguished French physician, died recently in Paris at the age of sixty-six, thus closing a brilliant career in experimental medicine. He was a leader among those whose efforts raised medicine from an empirical to an exact science based upon the application of physical and chemical methods.

His contributions to medicine forming a fitting memorial to his name are outlined as follows in the *Revue de Médecine* for 1929 (No. 1).

He showed the streptococic nature of facial erysipelas and of phlebitis in lying-in cases; in collaboration with Chantemesse he proved the specificity of the bacillus of Eberth; he was the discoverer of the bacillus of epidemic dysentery; his researches gave us knowledge of agglutination and the serum diagnosis of typhoid fever; with Chantemesse he developed the first anti-

typhoid vaccine; he created clinical serology; in 1900 he and Ravaut conceived the idea of the systematic study of pleural serosities from the cytological point of view; shortly thereafter he and Sicard gave to neurology and psychiatry the cytology of the cephalorhachidian liquid; he made contributions to the study of hydropigenous uremia, and originated the biological method of studying organs independently of their lesions.

—The annual meeting of the American Orthopsychiatric Association was held at the Hotel Pennsylvania in New York City on February 22 and 23. Among the papers of interest was one by Dr. Frederick H. Allen, director of the Philadelphia Child Guidance Clinic, which stressed the importance of emotional problems of parents and their influence upon children. Such a point of view is to be preferred to a direct attack upon the child's behavior. The same attitude was expressed by Dr. S. N. Hartwell of the Judge Baker Foundation, who postulated the principle that in the child's environment the people whom he knows and meets are more important than material things and events. Dr. Gerald H. J. Pearson of the Philadelphia Child Guidance Clinic also found parental attitudes more important than actual happenings in the formation of the child's personality. Dr. James S. Plant of the Essex County Juvenile Clinic, Newark, N. J., summarized a six years' study of 2,500 juvenile delinquents. Dr. Plant deplored the decline of family life and said that in the face of such a situation the psychiatrist must become less preoccupied with the study of the individual, as such, since he cannot be fully understood without reference to the environment in which he lives. Dr. Sanger Brown, II, spoke on "Why People Fail and Become Dependent". Dr. Clifford R. Shaw of the Institute of Juvenile Research spoke of crime in Chicago and showed the importance of environment over nationality in juvenile delinquency. Dr. Lawson G. Lowrey of New York presided.

All officers of the association were re-elected. They are: President, Lawson G. Lowrey, M. D.; vice-president, Augusta H. Bronner, Ph. D.; secretary-treasurer, George S. Stevenson, M. D.; counsellor, Karl A. Menninger, M. D.; editor, Herman M. Adler, M. D.